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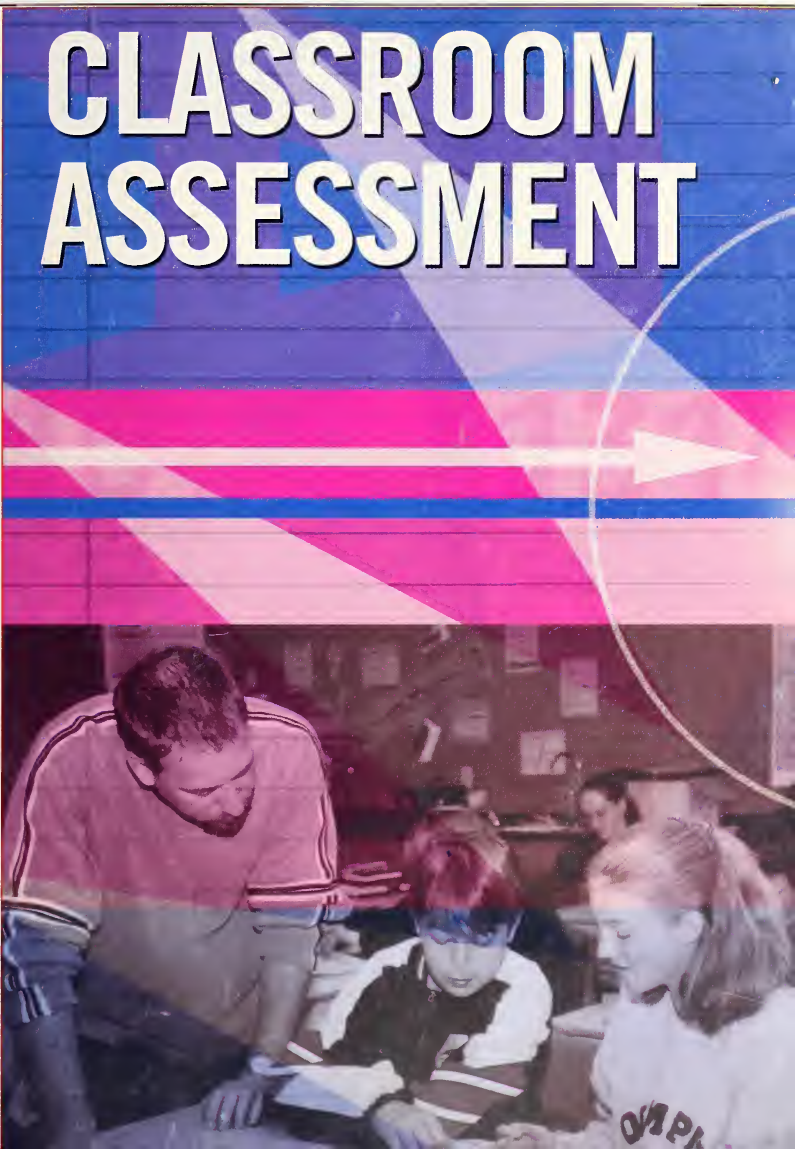
OISE/UT's Magazine for Schools Volume 30, Number 4, 2000

Ontario Institute for Studies in
Education of the
University of Toronto

CLASSROOM ASSESSMENT



Assessment Literacy

Principles and Standards

Tools and Strategies

Making a Difference

Guest Editors:
Lorna Earl and
Clay Lafleur

orbit

Classroom Assessment /Contents

OISE/UT's Magazine for Schools

Volume 30, Number 4, 2000
Classroom Assessment
Guest-edited by: Lorna Earl and
Clay Lafleur

Orbit publishes four theme issues per volume on topics of concern and relevance for teachers and administrators working in schools and school systems, from junior kindergarten to the end of high school.

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BTT Communications

Printed and Bound in Canada
by BTT Communications

Subscription Rates
$40.00 per subscription
(4 issues per volume) Incl. 7% GST
Bulk rates available.

Prepayment is requested.
Mail cheque or money order to:
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Second Class Mail
Registration Number 4511
ISNN 0030-4433
Canadian Publications Mail Product
Agreement No. 638528
GST # R108162

Assessment and evaluation are central to educational reform initiatives all over the world. Not only are countries, provinces and states relying on large-scale assessments as measures of the progress and success of their initiatives, but classroom assessment has become a major part of the agenda for improving student learning.

The changes that are occurring in classroom assessment are not just superficial tampering. They represent major shifts in thinking about learning, about accountability, about schools and about teaching. Classroom assessment reform is much more than using a variety of new techniques. It means teachers using their judgments about children's knowledge or understanding to improve the teaching process and to determine what to do for individual children. It means providing descriptions of student performance and sharing the decision-making. It means making assessment criteria visible and bringing parents and students into the process. It means making a fundamental shift in thinking about how and why assessment and teaching are integrally connected. It means rethinking curriculum and curriculum coverage.

Teachers routinely tell us that "assessment is the hardest part" of their work. In this issue we have tried to uncover some of the reasons and offer some direction. Changing classroom assessment is a political, emotional and technical undertaking. The articles in Section 1 frame some of the difficulties that are inherent in changing the purposes and approaches to classroom assessment. Section 2 provides a number of principles and standards that provide reference points for decisions about the nature and adequacy of classroom assessment policies and practices. In Section 3, the articles provide some insights into approaches that teachers are beginning to use in their classrooms. Finally, Section 4 poses some challenges to all of us to think about how classroom assessment can and might change, as we continue on the journey of improving learning for students in our schools.

In this issue we have tried to give voice and meaning to classroom assessment. Even with paradoxes and areas of uncertainty, assessment makes a profound difference to life in schools and to student learning and improvement. We realize that there is no perfect answer, especially when our day-to-day life is characterized by so many fundamental educational reforms. However, we also realize that enhancing our understanding of assessment and improving our classroom assessment practices come from making small changes that work.

It is our belief that inquiry fosters collaboration and collegiality, questioning and curiosity, reflection-in-practice and the search for better alternatives. In such a context there is an on going commitment to valuing curiosity, mutual respect, and support among and between individuals. In other words, there is a willingness to try new ideas and practices; there is a determination to remain open to the unforeseen and the unexpected. This is precisely what we need as we continue to learn about and to improve classroom assessment. The articles in this issue provide a background for open and informed public conversations and further inquiry about what works best.

Lorna Earl and Clay Lafleur
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ASSESSMENT LITERACY

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Richard J. Stiggins

Learning Teams For Assessment Literacy

Teachers will be expected to be far more assessment literate in the future than they are today or have been in the past. Virtually every set of standards of teacher competence developed recently holds the expectation that teachers will be competent in assessment.

This trend aligns requirements for the teaching profession with what we have long known to be the reality of assessment life in classrooms. Teachers can spend a third of their professional time or more involved in assessment related activities (Herman & Dorr-Bremme, 1982; Crooks, 1988; and Stiggins & Conklin, 1992). An appropriate level of assessment competence is required to do this job well. These new standards of professional excellence place significant new pressure on colleges of education to prepare their graduates to be assessment literate—a challenge they have long failed to meet (Noll, 1955; Roeder, 1972; Gullickson, 1984; Shafer & Lissitz, 1987; and Stiggins & Conklin, 1992).

Until higher education responds to this demand, local school district staff development professionals will continue to face the challenge of filling this long-standing gap in assessment literacy.

Assessment Literacy Defined

Teachers and administrators who are assessment literate understand the difference between sound and unsound assessment, evaluation and communication practices. Those who are assessment literate:

- ➢ understand what assessment methods to use in order to gather dependable information about student achievement
- ➢ communicate assessment results effectively, whether using report card grades, test scores, portfolios or conferences
- ➢ understand how to use assessment to maximize student motivation and learning by involving students as full partners in assessment, record keeping and communication

What Teachers Need to Know

Professional development in classroom assessment must build a deep understanding of the difference between sound and unsound assessment and a complete understanding of how to use assessment as a teaching tool. This translates into the following six classroom assessment competencies for educators (Stiggins, 2001).

First, they must understand the full range of users and uses of assessment. Users are found in the classroom, in instructional support roles and in the ranks of policy makers. Different users in different contexts need different information about student achievement in different forms and at different times to do their jobs. No single assessment can meet everyone's needs. Assessment literate educators understand and appreciate those differences.

Second, educators must be crystal clear about the achievement targets that they want their students to hit. Different forms of achievement (i.e., mastery of content knowledge, reasoning proficiency, performance skills and product creation proficiencies) require the application of different modes of assessment. Assessment literates know that the first question they must answer is, *"What do I want to assess?"* Only with that answer in mind can they determine how best to assess it.

Third, they must be prepared to use the full range of assessments to track student achievement, including selected response, essay, performance, and personal communication-based assessment formats. Teachers must know how to select an appropriate assessment method for their particular context and understand when to use it and why it fits best.

Teachers will be expected to be far more assessment literate in the future than they are today or have been in the past.

Fourth, they must understand how to assemble the exercises of whatever method they choose in order to sample student performance effectively and efficiently. Assessment literates can gather just enough evidence of student achievement to lead them to a confident conclusion without wasting time gathering too much.

Fifth, they understand the sources of bias that can creep into each assessment and they know what specific actions to take to prevent those potential problems from distorting their assessment results.

And finally, assessment literate teachers understand the relationship between assessment and student motivation. They know how to bring students into the processes of assessment and communicating results, thus turning these into confidence-building instructional interventions. They understand that this kind of deep student involvement greatly boosts the chances of student success.

Professional Development Options

What kinds of adult learning environments and experiences are most likely to help teachers and administrators learn to design, develop, and implement quality classroom assessments in these terms? Whatever approach(es) we use must meet certain standards of excellence in professional development practice. To be specific, they must provide:

- an infusion of new ideas regarding effective assessment practices—specific things competent assessors need to know and do to maximize the quality and impact of their classroom assessment
- opportunities to practice applying the principles of sound assessment, providing teachers with the chance to make newly-acquired assessment ideas and strategies come alive in their own classrooms
- assessment tactics that deliver concrete benefits almost immediately to teachers and their students so as to provide positive motivation to continue learning
- ways for educators to take responsibility for their own training—honouring their professionalism in the pursuit of excellence in assessment
- flexibility to adjust to various learning styles, training schedules, and paces of professional development
- opportunities for collaborative learning and collegial support groups, because adults learn most effectively when individuals share the lessons they have learned (support groups that include both teachers and administrators can be important here)
- efficiency of training, minimizing the amount of time and energy practitioners must invest to derive maximum benefit, because resources for professional development will always be thin

We must select from three choices in planning professional development to meet these standards: *workshops, learning teams, and individual study.*

Workshops—Workshops serve to introduce educators to the importance of being assessment literate. They also can reveal the potential benefits of adopting new classroom assessment strategies. Further, we can use workshops to encourage the formation of learning teams. But taken alone, workshops fall far short of meeting the professional development standards listed above. Suffice it to say that we cannot rely on workshops to help teachers attain the depth of understanding they need to meet emerging assessment responsibilities. Similarly, we must remain circumspect about the benefits derived from hiring external consultants to be our “assessment trainers.”

> *Expert consultants can help in planning instructionally relevant assessment systems. But they cannot take the journey to assessment literacy for us.*

Expert consultants can help in planning instructionally relevant assessment systems. They can offer motivational workshops to energize a faculty into wanting to become assessment literate. They can even provide guidance in mapping the route. But they cannot take the journey to assessment literacy for us. Each individual educator must take responsibility for getting there themselves. It takes that kind of personal investment of cognitive energy.

Learning Teams—This is why, after two decades of experimentation with all options, I strongly recommend an assessment literacy development plan that relies heavily on teacher (and administrator) *learning teams* as the basis of interaction and growth. A small group of three to seven teachers and administrators agrees to meet regularly to manage and promote their own professional development. They study together to fill the gaps in assessment literacy with the team's goal to help all members become as assessment literate as possible.

Individual Study—However, my recommended strategy relies even more heavily on individual study. Here's why, and the reason is critical: In between team meetings, each team member must agree to complete agreed upon assignments designed to advance the team's collective knowledge and skills in classroom assessment. These assignments might be the same for all team members. For example, they might read and reflect on the same pieces of professional literature or try the same assessment strategy, bringing the lessons they have learned from that experience to share in the group meeting. Or team members might complete different assignments, learning different lessons, so meeting time can be used to “jigsaw” or share a variety of insights for the benefit of all. This is where most of the personal professional growth takes place. Think about the work that is to be done. We must:

- take time to read about and reflect upon new assessment ideas
- shape them into applications that make sense in our personal classrooms
- experiment with those applications, trying strategies, observing effects, interacting with students and drawing inferences about what works and what doesn't
- collect our thoughts, reactions and conclusions into some summary form to share with the learning team at the next meeting

Assessment Literacy Training

To begin with, the value of being assessment literate must be fixed in the minds of all educators. Then, interested teachers and administrators must be given the resources and opportunity for teachers and administrators to independently, and as a group, become assessment literate. To stimulate interest within faculty and staff, a leadership group might offer an overview workshop on the importance of high-quality classroom assessment. The Assessment Training Institute's free district assessment planning guide, entitled *Leadership for Excellence in Assessment* can help with this. Any experienced staff development specialist can lead this self-evaluation using these materials with little advanced preparation. This kind of introductory session might culminate with the announcement that classroom assessment learning teams or study groups will be formed for all interested teachers and administrators.

Organizing Learning Teams—Within any district, learning teams can be configured in any of a variety of ways. Groups might be formed from among faculty members and administrators within one building, formed on the basis of grade level (within or across levels) or discipline (math, science, arts, etc.). Principals and vice-principals from various buildings might assemble to create a team for preparing to provide building-level leadership in this arena. Learning teams might come into existence as opportunities arise—for example, when an ad hoc committee is assembled to evaluate and consider revising a report card or when a curriculum-development team decides to deal with some underlying assessment issues. Participants might work together only for the period of time needed to complete their study. But all such instances represent opportunities for learning. Some school districts have found it prudent to also set up a "leadership study team" comprising a few key teachers and administrators from across the organization.

Other districts have issued the invitation to team up and ask those who are interested to form teams as they wish. They encourage teams to form and start at their convenience, pacing their work in a manner consistent with the schedules of team members. The flexibility of this professional development process is clear. In any case, as members complete an initial learning team experience, they can then fan out and lead a team effort involving others. Then, those participants might do the same, and so on, building a professional development pyramid. As time passes, those not involved at the outset will begin to see others around them managing assessment with renewed confidence. This will motivate them to learn valuable assessment lessons.

Specifics About Team Work—One excellent way to start is to make the first focus of learning team study to be a basic assessment text, such as *Student-Involved Classroom Assessment* (Stiggins, 2001). When this foundation is in place, specific discipline-based applications then become high priorities. But whatever the topic or reference the team decides to centre on, team members must understand from the start that these are not merely books to be read and discussed. A learning team is not a book club. Rather, these are books to be read, reflected upon, worked through, experimented with, discussed, and culled for ideas that work in each teacher's individual classroom learning environment. They contain no prescriptions, only possibilities from which teachers choose—pieces of clay to be molded to fit each individual teacher's needs. This is why we recommend such a heavy allocation of time to individual study, classroom experimentation, and reflection between learning team meetings. Team meetings are times for sharing lessons learned in the classroom assessment process; not merely lessons learned from reading the book. It is a time to share successes, to discuss those strategies that worked and why. It also is a time to share difficulties team members may have experienced, to figure out why problems came up, and to find solutions.

My recommended strategy relies even more heavily on individual study.

Motivating Participation in Learning Teams—The learning team method of professional development takes advantage of four factors that can encourage participation. It offers:

1. Individual study for participants who have an interest in experimenting on their own (with minimum risk of embarrassment if things go wrong);
2. Collaborative study for those who like to work together to share experiences and lessons learned;
3. Training when members feel it is an appropriate part of their overall professional development plan; and
4. Time to concentrate on one important topic long enough to internalize some new and useful ideas.

For many educators, the promise of these four factors will be incentive enough to encourage their participation. But for those who need additional incentive, the district might provide release time or extended contract time to permit teachers to participate in these efforts. Another option includes establishing an ongoing working relationship with a higher education institution to offer graduate credit. It has been our experience at the Assessment Training Institute that colleges of education are most willing to enter into productive working relationships with districts to make such an offering possible.

A Final Thought

One need only contemplate the dangers to students of the inaccurate day-to-day classroom assessment of their achievement to understand how critical assessment literacy is to the effective functioning of schools. If we mismeasure achievement, we might fail to identify important learner needs, group students inappropriately, place faith in instructional strategies that really don't work, assign inaccurate grades, leave students with a sense of failure when they really succeeded, or leave students feeling successful when they really failed. In short, we place students directly in harm's way. Yet, even in the year 2000, we cannot assure our students and their families that we accurately assess achievement.

We have yet to invest the assessment resources needed to build an assessment literate school culture. We know what teachers need to know to function effectively as classroom assessors, and we know how to help them become assessment literate. We have very flexible and efficient professional development options available to us. Teachers just need the opportunity to team up and learn.

Note

This article has been excerpted from "Learning Teams for Assessment Literacy" published by the Assessment Training Institute in Portland, Oregon. Direct inquiries to the Assessment Training Institute: 50 SW 2nd Ave., Suite 300, Portland, Oregon 97204, U.S. 1 (800) 480-3060 or ati@assessmentinst.com

References

Crooks, T. J. (1988). The impact of classroom evaluation on students. *Review of Educational Research, 58*(4), 438–481.

Gullickson, A. (1984). Matching teacher training with teacher needs in testing. A paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

Herman, J., & Dorr-Bremme, D. (1982). Assessing students: Teachers routine practices and reasoning. A paper presented at the annual meeting of the American Educational Research Association, New York, NY.

Noll, V. H. (1955). Requirements in educational measurement for prospective teachers. *School and Society.* 80, 88–91.

Roeder, H. H. (1972). Are today's teachers prepared to use tests? *Peabody Journal of Education,* 59, 239–240.

Schafer, W. D., & Lissitz, R. W. (1987). Measurement training for school personnel: Recommendations and reality. *Journal of Teacher Education,* 38(3), 57–63.

Stiggins, R. (2001) *Student-involved classroom assessment,* 3rd Ed., Columbus, OH: Merrill, an imprint of Prentice Hall.

Stiggins, R., & Conklin, N. (1992). *In teachers' hands: Investigating the practice of classroom assessment.* Albany, NY: SUNY Press.

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The Paradox of Classroom Assessment

Steven Katz and Lorna Earl

"Marks really do not fit with the thrust of the curriculum we are using."

"How do you know that a kid 'appreciates'? That is really, really tough to measure."

"The interim report asks for satisfactory or not satisfactory. Well, what is satisfactory? Who defines what is satisfactory? Is it 50s, 60s, 70s? It's not really clear. And if it's not clear to us it's not clear for the parents."

"I modified the program so they can be successful. Well, what is successful? Is successful 50%, 60%, 80%? When you modify for those children so that they are successful, if you have a watered down program to the extent that these children are, on paper, a success, and they go off to high school and those modifications aren't met, you've watered it down to the extent that it's not a true outcome."

(from Earl & Katz, in press)

While assessment of students in terms of expressed goals has always been a central feature of schooling, recent concern with accountability has led to an increased focus on programs that assess students against "objective" standards. The outcomes of such assessment programs can then be used to judge not only children relative to each other, but also classrooms, schools, provinces, and nations. Teachers, understandably, are poised halfway between the children they serve and the mandated "objective" standards. Their conflict is apparent in the comments above—comments from real teachers grappling with changes in classroom assessment. In this article, we identify the roots of the conflict.

Schools are the institutions charged with the transmission of competencies from generation to generation. Teachers, however, are caught between two sets of responsibilities in their classes. They are required to ensure that students meet fixed and predetermined goals, yet they are very aware that their students are individuals with varied backgrounds, interests, and understandings (Clay, 1996; Olson & Katz, in press). Contradictions inherent in classroom assessment practices become unavoidable because each of these elements map onto a different conception of competence.

There are, at least, two very different conceptions of competence at play on the landscape of formal education (Katz, in press). What are these two contrasting notions of competence? What are their implications for assessment? In answering these questions, we expose the paradox of classroom assessment.

There are, at least, two very different conceptions of competence at play on the landscape of formal education.

"The Known"

"Now, what I want is Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life. Plant nothing else, and root out everything else. You can only form the minds of reasoning animals upon Facts: nothing else will ever be of any service to them..."

So went the opening rant of Dickens' character, Mr. Thomas Gradgrind, as he presented himself to "...the little pitchers before him, who were to be filled so full of facts." Although, these days, no one urges just the facts, competence defined in terms of the possession of knowledge is a well-established feature of schooling. Students arrive at school with minds considered devoid of the necessary facts, rules, and principles which must then be transferred in a unidirectional fashion from the instructor, text, or other authority. Teaching becomes an exercise in telling, and learning an exercise in remembering (Olson & Katz, in press).

The substance of what is told (taught) and what is remembered comes in the form of propositional knowledge, knowledge that is taken to have an existence independent of the individual knower. The general assumption is that knowledge is found not made, that truth is "the truth," not that which is taken to be true. Few people ever doubt this traditional view of "the known." For most, knowledge is certain and permanent, and viewed as either right or wrong. Chandler, Boyes, and Ball (1990, p. 377) caricaturize this "absolutist" statement of knowledge as a "free-standing attribute of the environing world that only secondarily comes into the passive possession of those who, because they happen to be in the right place at the right time, automatically end up with some portion of the unmitigated truth directly embossed upon the recording equipment of their minds." Disagreements between people, then, can be attributed to the lack of facts among one of the parties, or the reins of certainty are pulled in by reference to a disagreeable position as "just your opinion."

In this view, appropriate authorities authenticate "the truth." Belenky *et al.* (1986) call this "silent knowing," in which the individual accepts the authority's proclamation about what is true. There is no belief that the knower can learn from his or her own experiences and knowing does not belong to the individual. This external definition of "the known" provides clear specifications as to what is to be taught. Nowhere is this manifestation more evident than in formal curriculum documents that embody those truths.

What is especially interesting from our assessment-centred perspective is that in pro-

viding such clear specifications of "the known" as that which must be taught, the formal curriculum also provides an associated set of standards for assessing learning achievements. Classroom assessment becomes the vehicle for gauging the closeness of fit between what is told and what is remembered (Earl & Katz, in press). The evidence used to justify beliefs as "knowledge" is traceable to authorities (e.g., books, teachers, media). Since "the truth" is acquired from appropriate authorities, justification for belief normally takes the form of what Belenky *et al.* (1986) have termed "received knowing." That is, evidence consists of congruity with the authority, be it person or text.

Assessments of all kinds—from questioning in class to formal examinations—operate to perform this "concordance check." A common classroom pattern is the IRE sequence (Initiate, Respond, and Evaluate), where the teacher asks a question, a student responds, and the teacher gives feedback (Alvermann, O'Brein, & Dillon, 1990; Cazden, 1988). Unlike questions which are genuine requests for information, in classroom questioning teachers are aware of the answers they are looking for (Applebee, 1996). Thus, Gradgrind's request for his star, "well-crammed" pupil, Bitzer, to define a horse has nothing to do with Grandgrind's knowledge or interest in the equine domain and everything to do with gauging the congruity of Bitzer's definition of a horse with that given by the dictionary as:

"Quadruped. Graminivorous. Forty teeth, namely, twenty-four grinders, four eye-teeth, and twelve incisive. Sheds coat in the spring; in marshy countries, sheds hoofs, too. Hoofs hard, but requiring to be shod with iron. Age known by marks in mouth. "

The point is further illustrated by the experiences of those who have worked with younger children and received one of the following answers to a less than honest "why" question: "Because you said so" or "Because the book said so."

By defining that which is "known" and subsequently what must be taught, the formal curriculum is essentially selective (Glaser & Silver, 1994). We have, as just one illustration, the provincial government of Ontario introducing a highly centralized, domain-specific provincial curriculum which spells out exactly what students will know and when. For example, in mathematics, by the end of Grade 8 students will "represent whole numbers in expanded form using powers and scientific notation (e.g., $347 = 3 \times 10^2 + 4 \times 10 + 7$; $356 = 3.56 \times 10^2$)" (Ontario Ministry of Education and Training, 1997, p. 26). The surrounding rhetoric explains the ease with which children will be able to move between school board jurisdictions, given the new-found consistency in what is to be taught and learned.

The virtue of such a specific curriculum is its direct relationship to what must be taught. This specification sets the stage for a rather specific definition of accountability, accountability defined as a kind of surveillance mechanism which proceeds by way of a congruity check. What is prescribed by the formal curriculum necessarily exists apart from individual teachers and their students. It is a blueprint for common action and by definition a yardstick for common evaluation, hence systemic accountability. In this way, it is possible to begin to talk about a target competence "norm" or "benchmark."

Assessment, in this sense, is about judgment, judgment about who will go on and where they will go, or, to put it differently, about who is competent and who is not.

While today's classrooms exemplify the educational vision detailed above, they are also characterized by more than simply a concern for "the known." In this conception, personal beliefs, indeed, personal interests and backgrounds are relegated to the substandard positions of speculation and opinion.

"The Knower"

In contrast to Bitzer's definitional exactitude, young Sissy Jupe includes her *experiences* with the animal in her definition of a horse. This definition meets with the Gradgrind reply, "Girl number twenty unable to define a horse! Girl number twenty possessed of no facts, in reference to one of the commonest of animals!" However, much of what we see in today's classrooms accepts, indeed encourages, what is known subjectively and experientially and seeks to develop it. This image of respect for the child's point of view is one well captured in the writings of John Dewey. In nature, he argued, thinking is stimulated by real problems that the learner has a personal vested interest in solving (Dewey, 1902/1966).

Child-centredness is, by now, a dominant theme in both cognitive-developmental and sociocultural perspectives of education. Learning is seen to occur as previously acquired cognitive structures are coordinated to form new superordinate structures. Initially, structures develop from concrete experiences, and thinking remains concrete until the coordination of structures allows for the emergence of abstract thought. Cognitive development is regarded as a socially mediated process. The conversation metaphor (Applebee, 1996) is a popular one, with participation in classroom discourse serving as the vehicle through which meanings are constructed.

In considering the child's point of view, the mind is acknowledged as a place of privately held beliefs and ideas (Olson & Bruner, 1996; Olson & Katz, in press). Children are seen as individuals capable of making sense of their world both through their interactions with the environment and with others. Learning, then, is a process of subjective interpretation, while teaching creates opportunities for sharing beliefs through collaborative discourse.

Defining competence in terms of "the knower" leads to a very different set of assumptions than those discussed in connection with "the known." In recognizing that "the known" is neither God-given nor an indisputable fact of nature, knowledge is viewed as fundamentally made, not found, and consequently uncertain. Truth is seen as varying from person to person and knowledge is interpreted subjectively. Belenky *et al.* (1986) use the term "subjective knowing." Personal beliefs count as evidence for knowing. To justify beliefs is to share them with others. Competence is seen as drawing ideas together in a way that makes sense.

This notion of competence provides a new perspective on classroom assessment. Learners, as interpreters, necessarily construct somewhat different interpretations of any text or event. Classroom assessment in this view is the mechanism that promotes the interpretation and revision processes of the learner. It is something best accomplished by the self since it is the knower who holds privileged access to the relevant beliefs and intentions, though they are also obliged to give a public account. This accounts for the interest in portfolios and other self-assessment vehicles (Earl & Cousins, 1996; Wilson, 1996) which promote students' articulation of their own reasons for their beliefs and opinions rather than right answers as dictated by an authority (Buchmann, 1986).

When reasons replace right answers, assessment, as we have seen, becomes in large part the responsibility of the knower; the knower has to justify his or her views. Assessment opportunities in classroom patterns can change too, from IRE to ICE (Ideas, Connections, Extensions). ICE encourages students to form and share their own ideas, connect them to one another, and extend them beyond personal experience (Wilson, 1996). Gardner (1990) has proposed "individually configured excellence" as a title reflective of this adaptive model of education. Schooling works to identify and develop sources of competence in individual students. It takes individual backgrounds, interests, and understandings into account.

Conceptions of education driven by a concern for "the knower" have their own limitations. When competence is seen as purely subjective, truth becomes variant and certainty is elusive. As Chandler and colleagues (1990, p. 379) comment, "... all claims are challenged, every heart-felt belief is held up to ridicule, and all action is seen as permanently premature." The problem here is that in the absence of certainty, all beliefs appear equal. It is this very phenomenon that supports mediocrity or, as Neatby (1953) puts it, a system of education that offers "so little for the mind." Without objective standards, and the associated norms or benchmarks, systemic accountability becomes problematic for both individuals and educational institutions. It is in terms of such standards that schools are held accountable for fulfilling an institutional mandate, a mandate generally advanced in terms of those very standards.

The Paradox Exposed

Educational theory for much of the last century attempted to come to grips with this gap between what is known generally and should be transmitted, and what is known subjectively and should be developed. Yet this effort typically consisted of little more than staking opposing claims on the epistemological battleground. Classical education theory considered knowledge to be an entity that exists in some tangible form capable of being transferred intact to children. Educational reformers, such as Dewey, took the other pole insisting on the primacy of subjective and communal experience as the basis of all knowledge.

Although theorists have been more or less content to operate in spheres defined by one epistemology or the other, teachers do not enjoy the luxury of the separation. Both elements are necessary in communicating something about the learner to the learner and to others. They each provide a way of thinking about the self and serve as vehicles through which children come to think of themselves as competent on the one hand or incompetent on the other. The challenge to educational researchers and practitioners is very simply—how to reconcile them?

References

Alvermann, D., O'Brien, D., & Dillon, D. (1990). What teachers do when they say they're having discussions of content area reading assignments: A qualitative analysis. *Reading Research Quarterly*, 25, 296–322.

Applebee, A. N. (1996). *Curriculum as conversation: Transforming traditions of teaching and learning.* Chicago: The University of Chicago Press.

Belenky, M., Clinchy, B., Goldberger, N., & Tarule, J. (1986). *Women's ways of knowing: The development of self, voice, and mind.* New York: Basic Books.

Buchmann, M. (1984). The use of research knowledge in teacher education and teaching. *American Journal of Education, 92*, 421–439.

Cazden, C. (1988). *Classroom discourse: The language of teaching and learning.* Portsmouth, NH: Heinemann.

Chandler, M., Boyes, M., & Ball, L. (1990). Relativism and stations of epistemic doubt. *Journal of Experimental Child Psychology, 50*, 370–395.

Clay, M. (1996). Accommodating diversity in early literacy learning. In D. R. Olson & N. Torrance (Eds.), *The handbook of education and human development* (pp. 202–224). Cambridge: Blackwell.

Dewey, J. (1902/1966). *The child and the curriculum.* Chicago: The University of Chicago Press.

Earl, L., & Cousins, J. B. (1996). *Classroom assessment: Changing the face; facing the change.* Toronto: Ontario Public School Teachers' Federation.

Earl, L., & Katz, S. (in press). Classroom assessment: Teachers' struggles to change. In N. Bascia & A. Hargreaves (Eds.), *The sharp edge of change: Teaching, leading and the realities of reform.* London: Falmer.

Gardner, H. (1990). The difficulties of school: Probable causes, possible cures. *Daedalus: Journal of the American Academy of Arts and Sciences, 119*, 85–113.

Glaser, R., & Silver, E. (1994). Assessment, testing, and instruction: Retrospect and prospect. *Review of Research in Education, 20*, 393–419.

Katz, S. (in press). Competency, epistemology and pedagogy: Curriculum's holy trinity. *The Curriculum Journal*, 11(2).

Neatby, H. (1953). *So little for the mind.* Toronto: Clarke, Irwin.

Olson, D. R., & Bruner, J. S. (1996). Folk psychology and folk pedagogy. In D. R. Olson and N. Torrance (Eds.), *The handbook of education and human development* (pp. 9–27). Cambridge: Blackwell.

Olson, D. R., & Katz, S. (in press). The fourth folk pedagogy. In B. Torff and R. J. Sternberg (Eds.), *Understanding and teaching the intuitive mind.* Hillsdale, NJ: Erlbaum.

Ontario Ministry of Education and Training. (1997). *The Ontario Curriculum Grades 1-8: Mathematics.* Toronto: Queen's Printer.

Wilson, R. (1996). *Assessing students in classrooms and schools.* Toronto: Allyn & Bacon.

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Cinde L. Lock and Robert J. Wilson

Two Solitudes— Classroom Teachers and Psychometric Researchers

The assumption that teachers need to improve their knowledge of psychometric practice is often embedded in evaluation policies and in research conducted by measurement specialists. But most researchers who specialize in measurement and evaluation do not have a very good basis for making recommendations about classroom assessment since they don't understand what teachers actually do and need in the context of their practice. Unfortunately they have a "decontextualized" understanding of the practice of student assessement which has resulted in a case of two solitudes. This article explores the gap in understanding between educators and researchers and policy makers.

Common Research Assumptions

In the educational literature on student assessment, there is a tradition of providing teachers with "best practice" as defined by those with an expertise in measurement and evaluation (see Mayo, 1964). This conceptual model assumes that if classroom assessment practice is logically derived from psychometric practice, then better judgments and decisions for students will result, thereby enhancing student learning. Indeed, most psychometric researchers perceive teachers to be effective in conducting student assessments when they act as measurement technicians. Similarly, most policy documents assume that these traditional methods of assigning grades to students are preferable means of student assessment practice.

Typical of literature based on this assumption is a recent study by Novak, Herman, & Gearhart (1996) which investigates the adequacy of a new rubric for assessing narrative writing. Using percentage of agreement, correlations between raters, and generalizability coefficients, the authors report support for the rubric in terms of reliability of use across multiple samples of work. The study ends with a recommendation for teacher use. The unstated assumptions behind these prescriptions are that teachers require a high degree of score accuracy in their use of rubrics and that the same elements would feature in assessments across all examples of student assignments in narrative writing.

In a second example, Frisbie & Friedman (1987) define the domain of assessment and evaluation knowledge that teachers should possess. They derive their recommendations for teachers from the Test Standards document; a volume, produced by test and measurement specialists from the American Psychological Association, the National Council on Measurement in Education, and the American Educational Research Association. The authors' expectation is that teachers will take their recommendations and use them to produce defensible assessments of their students. Support for the suggested criteria is a "decontextualized" understanding of teachers' practices in student assessment. And, the assumption is that these principles, once in place, will result in better learning for all students.

In a paper summarizing trends in performance assessment, Arter and Stiggins (1992) offer some "lessons learned to date in performance assessment." They begin with the need for clear targets and then move on to the technical demands of comparability and accuracy. They also conclude with some recommendations for teachers; namely that "to have performance assessments that mean anything, we need to first ensure that teachers perceive them as good instructional tools and know how to use them as instructional tools" (p. 8). Arter and Stiggins argue that this appropriate use will require a great deal of teacher training. Yet, these researchers provide no evidence that supports the notion that beginning with "clear targets" would be more desirable for teachers, than, say, knowledge of the learner. Nor is there any defense for the notion that teachers' first concerns should be with the assessments as instructional tools rather than with instructional tools that might serve as assessments.

> *Most researchers who specialize in measurement and evaluation do not have a very good basis for making recommendations about classroom assessment*

Stiggins (1988) also assumes that psychometric knowledge is related to "best practice." He asserts that "the grading practices of many teachers are deeply flawed...teachers are often untrained in and therefore are often unaware of the principles of sound grading" (p. 365). In accordance with this belief, he recommends a program of teacher education that emphasizes training and technical assistance provided by classroom assessment specialists

...there is a tradition of providing teachers with "best practice" as defined by those with an expertise in measurement and evaluation

who also provide in-service education. He further recommends that training and certification involve teachers in learning about: many purposes and methods of assessment, relevance for their grade and subject, congruence with their district policies, and key features of oral and nonverbal feedback. While simultaneously advocating the need for more research in classroom assessment, it appears that Stiggins' recommendations can be implemented prior to the presentation of any empirical findings. As noted earlier, this approach is endemic in the field of classroom assessment research and in the evaluation policy decisions made in schools.

When an empirical investigation of teachers' practices is conducted, researchers also frequently use "best practice" as the criterion against which teachers are rated. However, they commonly assume that "best practice" relates to the use of psychometric knowledge in classroom assessment rather than to the use of an understanding of the context of student assessment as it occurs in the classroom.

For example, Oescher and Kirby (1990) conducted a study intended to "develop and apply a model that can be used in identifying classroom teachers' assessment needs" (p. 1). The study cited literature which suggested that teachers do not engage in systematic analyses of their tests, and thus do not know what kinds of learning, if any, their tests are measuring. Oescher and Kirby (1990) collected the most recently administered test from 35 mathematics and science teachers. These tests were then analyzed according to item format, cognitive levels addressed, item quality, and presentation, as the researchers held these factors to be important for reliability and validity. Not surprisingly, the authors found inadequacies in their teachers' instruments using these criteria. They noted that, "teachers do not consistently use tables of specifications to construct their tests, nor do they empirically analyze item or test level data" (p. 14).

From the assumptions made by measurement specialists in their recommendations for teachers and in their empirical research, it is evident that most researchers have considered test design and the analysis of test results to be more important than the context in which student assessment is being implemented in the classroom. Unfortunately, these traditional beliefs and assumptions have been transferred into the policy decisions made in schools. Thus, policy documents that encourage teachers to place an emphasis on quantitative practices might be encouraging teachers to decontextualize their understanding of students in their assessment practices.

In Classroom Contexts

There are some examples of research in which psychometric assumptions have been kept to a minimum. In such literature, more of the teachers' own values have emerged. In a few instances, action research has been conducted by teachers themselves. Saurino & Saurino (1994), for example, report on research they conducted on the use of alternative assessments in their Grade 8 classroom. In comparison to research conducted by measurement specialists, their results are unrelated to the accuracy and adequacy of the instruments implemented during the research. Instead, Saurino and Saurino found that the use of alternative assessments improved motivation and academic achievement among four out of five at-risk students studied, while teacher-student relationships also benefited. If school policies had inhibited these teachers from implementing alternative assessment practices in their classrooms, then these important findings might never have been made.

When researchers go into classrooms without advance criteria, they frequently find that teachers do have different purposes for assessments; goals that seem more salient to their practices than to technical adequacy. For example, Philipp, Flores, Sowder, & Schappelle (1994) examined the practices of four exemplary, middle school mathematics teachers and found:

1. The teachers were comfortable about their means of assessment and saw it as critical to their teaching.
2. They used writing as an essential component of mathematics assessment, requiring that their students maintain a mathematics journal.
3. They used the "quality of student explanations" as a tool for assessment.
4. Observation of students' activities during class was another important tool for assessment.

Clearly, any attempt to survey these teachers' practices with questionnaires designed to assess their congruence with formal testing practices would miss much of what they do.

Nicholson & Anderson (1993) move closer to discovering modes of assessment that teachers use in practice. Through interviewing 21 teachers from Kindergarten to Grade 4, they found that teachers believe that assessment serves several purposes and is not merely an indicator of achievement. Most importantly, the teachers believe that their assessment methods help them to determine what their students need to learn. Reporting to parents is the next most important purpose, but assessment also serves the goal of determining students' learning styles, ensuring teacher accountability, and providing a record for future teachers. To accommodate this variety of needs, these teachers relied most often on constant observation of their students. In addition, these teachers were seemingly unconcerned about the accuracy and validity of their observations although they did worry about missing the quiet students.

Implications

There is a sense of two solitudes in the literature concerning classroom assessment practice. On the one hand, there is a large body of published, academic literature that features little empirical study of practice in schools and a lot of expert recommendations for teachers to follow. This literature has traditionally been the

When researchers go into classrooms without advance criteria, they frequently find that teachers do have different purposes for assessments...

reference point for creating school evaluation policy. On the other hand, there is a body of literature featuring teachers' personal experiences with techniques of assessment that meet their perceived instructional needs. As each group has a different set of criteria for what constitutes best practice, and which purposes of assessment are more critical, there is little overlap between the two literatures.

If we seek to change practice in ways that enhance the role of assessment in classrooms and schools, there is a need to first determine the roles that assessment is supposed to play in these settings. It will be important, then, to determine how school policies influence teachers' practice and to seek ways of making policy changes that are relevant to how assessment is conducted in the context of classrooms and schools. Such changes might encourage teachers to continue to improve their practices rather than hinder them in doing so.

References

Arter, J. A., & Stiggins, R. J. (1992, April). *Performance assessment in education*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Briscoe, C. (1993). Using cognitive referents in making sense of teaching: A chemistry teacher's struggle to change assessment practices. *Journal of Research in Science Teaching, 30*, 971–987.

Frisbie, D. A., & Friedman, S. J. (1987). Test standards: Some implications for the measurement curriculum. *Educational Measurement: Issues and Practice, 6*(3), 17–23.

Lock, C. L. (1998). *Influences on the implementation of new assessment practices: A case study*. Unpublished master's thesis, Queen's University, Kingston, Ontario.

Mayo, S. T. (1964). What experts think teachers ought to know about educational measurement. *Journal of Educational Measurement, 1*(1), 79-86.

Nicholson, D. J., & Anderson, J. O. (1993). A time and place for observations: Talking with primary teachers about classroom assessment. *Alberta Journal of Educational Research, 39*, 363–374.

Novak, J. R., Herman, J. L., & Gearhart, M. (1996). Establishing validity for performance-based assessments: An illustration for collections of student writing. *Journal of Educational Research, 89*, 220–233.

Oescher, J., & Kirby, P. C. (1990). *Assessing teacher-made tests in secondary math and science classrooms*. Paper presented at the Annual Meeting of the National Council on Measurement in Education. Boston: MA.

Philipp, R. A., Flores, A., Sowder, J. T., & Schappelle, B. P. (1994). Conceptions and practices of extraordinary mathematics teachers. *Journal of Mathematical Behavior, 13*, 155–180.

Saurino, D. R., & Saurino, P. L. (1994, November). *Collaborative teacher research: An investigation of alternative assessment*. Paper presented at the annual meeting of the National Middle School Association, Cincinnati, OH.

Stiggins, R. J. (1988). Revitalizing classroom assessment: The highest instructional priority. *Phi Delta Kappa, 69*, 363–368.

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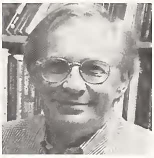

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The New World of Performance-based Assessment

Michèle Schmidt and Leo Plue

Assessment-led reform plays an integral part in promoting higher standards of teaching, learning and public accountability (Earl, 1995). According to Stiggins (1990), classroom assessment, in particular, influences student learning, student self-concept and general pedagogy. Although large-scale assessments generally receive the most public attention, classroom assessments (which include performance-based assessment) are becoming increasingly important.

Classroom assessment has traditionally consisted of teacher-designed paper and pencil tests interjected at the end of a unit of study to ascertain the extent of student learning leading to a grade. This type of assessment often focuses on memorization and basic skill development (Stiggins, 1997). As educational reform gains wider public acceptance, there has been a call for increased use of assessment approaches that go beyond the traditional paper and pencil format to include strategies like performance assessment (Stiggins, 1997). These alternative assessment approaches reflect a shift in emphasis from assessment as a selection procedure to one of certification, accountability and learning. Alternative assessments are often designed to motivate students to take more responsibility for their own learning, to make assessment an integral part of the learning experience itself and to embed the process in authentic learning activities based on higher order thinking skills (e.g., investigation, problem-solving, persuasive writing etc.).

The underlying principle of performance-based assessment, in particular, involves assessing students within the context of classroom tasks. These tasks are generally accompanied by a set of criteria and objectives that become the basis for assessment. Assessments can include pencil-and-paper assessments, self and peer assessments and conferencing, in which a range of skills and knowledge are assessed (e.g., speaking and listening; presentation and organization skills; participation and leadership skills). A key component, therefore, of performance-based assessments is its "real-world" or practical orientation. Concrete, real-world problems, however, are messy, involve uncertainty, complexity and present measurement difficulties. As a result, "real-world problems often do not harmonize [well] with mandated curricula, textbooks, standardized tests...and the 40 [or 80] minute period. [Not surprisingly,] teachers who attempt using real-world problems with their students tend to be those renegades who thrive on change and risk-taking" (McDonald, 1991: 21).

This article is about the experiences of teachers and students who participated in the pilot stage of a performance-based assessment project.

The Millennium Project

The Millennium Project was designed as a working example of performance-based assessment, developed by the Assessment Training Consortium, a network of five Ontario school boards. The project is being phased in gradually over a period of several years, and this particular phase was designated as the project's pilot stage. As a first phase implementation of this project, a few schools from each board were selected to participate. A project committee consisting of representatives from each board was established. These project team members managed the project with the assistance of a committee of teachers from each board.

...teachers who attempt using real-world problems with their students tend to be those renegades who thrive on change and risk-taking.

The Millennium Project can be seen as a vital link in the secondary reform initiative currently underway in Ontario. It serves as a vehicle for implementing progressive, standards-based performance assessment at the secondary level. While the assessment was intended to generate data for teachers about their students' progress, there was also the potential to broaden and improve secondary teachers' classroom assessment practices. Students involved in the Millennium Project (mostly Grade 11 students) were required to demonstrate sophisticated problem-solving and critical thinking skills throughout the course of the project. Student teams were each required to investigate and propose a solution to a complex, real-life problem. They demonstrated evidence of their abilities to think critically, to conduct research, to synthesize information and to present a solution to the problem, both orally and in written form, and to demonstrate that they had acquired essential skills and knowledge from across the secondary school curriculum.

The problems they investigated were designed by teams of educators from each of the member boards and were intended to be relevant, rigorous, and eclectic, but still remain curriculum based. The students were expected to demonstrate the process of their investigation in addition to the conclusions they reached. The problems were carefully constructed in a manner that included sufficient information to suggest how students should proceed but never enough information to enable students to solve the problem without further inquiry. Students' individual and group work as well as their oral defenses were evaluated by a variety of judges (including community) using a number of different rubrics to ensure a fair and balanced assessment procedure.

Examples of student projects were:

- research and raise awareness about the water quality of the Don River
- design a greenhouse and a new science office with storage area for exemplars
- develop a marketing plan for school programs
- solve a problem in biotechnology and determine its effect on medicine or industry
- research the pros and cons of a housing development in the community

A Pilot Study

The primary intent of our study was to determine teachers' and students' perceptions of a performance-based assessment activity; its benefits and pitfalls; and any needed modification. These data were gathered through semi-structured teacher interviews, student focus groups and artifact collection.

Fourteen schools and 32 teachers from four school boards were involved in the pilot project during the 1998/1999 school year. Fourteen teachers and 48 students from nine schools were interviewed. The schools were primarily selected by project team members from each board. An attempt was made to include diverse school settings and subjects and the grade levels ranged from Grade 9 to OAC (although the main focus of the project was intended for Grade 11). There were some incidences in which teachers and their students requested to be interviewed. Since the project was implemented in the final semester, the interviews were conducted during the months of May and June 1999. Interviews were tape recorded and subsequently transcribed. One school board carried out the pilot project in the fall of 1999 and was not part of the current data gathering procedures.

Findings

A New World of Assessment—Performance-based assessment is, as some of these teachers discovered, a new world. The participating teachers were involved in a dynamic of change that influenced their conceptions of teaching and assessment, student learning and their own role as teachers in and out of the classroom. These changes are characteristic of what Fullan refers to as "significant change"—involving the use of new resources, new teaching approaches and the alteration of beliefs. Fullan (1991) states that educational change does not consist of a single focus; rather, it is multi-dimensional. Consequently, the impact of the project on teachers' practices and beliefs was multi-dimensional, complex and varied.

Teachers confronted problems in terms of their ability to accommodate implementation of the project. For example, teachers struggled to overcome a lack of technical skills (e.g., computer) and subject knowledge. Contemporaneous with these challenges were many organizational constraints that made implementing the project more difficult. Key issues concerning project logistics indicated problem areas involving resources and support. Teachers expressed a need for suitable research and presentation facilities, financial and board support and better access to resources (e.g., computers, software).

Teachers struggled to become more proficient at assessment. Hargreaves et al. (1997) noted in a study of Grade 7 and 8 teachers implementing The Common Curriculum that "teachers routinely told [them] that assessment [was] the hardest part [of that process]" (p. 46).

How do I assess student work using

these new assessment approaches?

What should I assess?

How do I use rubrics?

Similarly, teachers in this study identified many assessment issues that they were concerned about. In particular, teachers felt challenged by the prospect of implementing new assessment strategies.

Teachers asked the following questions: How do I assess student work using these new assessment approaches? What should I assess? How do I use rubrics? There was also the pervasive concern about "covering" the curriculum. For many teachers, real-life problems, despite their potential, seemed incompatible with classroom realities. This contradiction was never more prevalent than when teachers attempted to reconcile assessment practice with grading requirements.

The emotions of those involved in the project were diverse. Teachers experienced feelings of discomfort, uncertainty, apprehension, anxiety and frustration. These feelings seemed to confirm that the Millennium Project was a new phenomenon in addition to being a daunting step forward for many teachers. Teachers in essence were asked to make profound changes in their teaching and assessment practices, as well as in their pedagogical beliefs.

Building a Culture of Inquiry—Perhaps the most powerful aspects of this project were the occurrences of teachers making changes in their practice that were guided by changing beliefs. For example, teachers collaborated with interested stakeholders inside and outside the school (e.g., other colleagues, the public and the local business community). Teachers also wrestled with the challenges of standards and soon realized that they would have to entrust their students to external experts in order to gain a more accurate assessment of standards. Teachers frequently asked the following questions: When is a particular performance good enough and when is it not? What does a "good" performance look like? How can a school reliably establish a standard for the varied performances of so many students engaging in so many different tasks?

As a result of the above conditions, a culture of inquiry began to emerge. Teachers, the community and students began to engage in a dialogue about these very issues. Students were required to seek external information beyond school walls. Teachers had to be willing to trust their students' knowledge and the expertise of community mentors. The project began fostering a different conception of teaching than just the delivery-of-instruction. This alternative metaphor of teaching resulted in the teachers' role altering significantly from the traditional one. Teachers became tutors, mentors, coaches, collaborators, consultants, guides, gatekeepers and even students themselves, helping their students understand their own thinking and guiding them as they searched for new information. As a result, students became better problem solvers because they developed skills such as reasoning, collaboration and persistence.

This shift in the conception of teaching created discomfort for some teachers while others revelled in this new paradigm. Certain teachers had difficulty determining how to teach under these circumstances—how to grant independence while still providing safe boundaries; how to guide without directing; how to distinguish between a collaborative intervention and a controlling one.

Stretching Student Thinking—The Millennium Project was intended to "stretch" or expand student thinking. Students' responses indicated that the Millennium Project promoted higher order learning, recognized and promoted a wide range of skills and achievements, empowered students, encouraged creativity and communication and pointed to new conceptions of knowledge. More specifically, students enjoyed non-teacher-directed activities and the open-endedness of the project. Teachers' observations of their students included comments such as the following: "It just goes to show how much they're seeking non-teacher-directed things to do;" "They really liked the open-endedness;" "They thought it was really great that they were able to work on something so different."

Teachers became tutors mentors, coaches, collaborators, consultants, guides, gatekeepers and even students themselves.

By being task oriented, the Millennium Project had the capacity to recognize and promote a wide range of skills and achievements, including personal, practical or intellectual ones. This broadening of opportunities for demonstrating achievement stimulated student motivation. Students liked the challenge and seemed eager to repeat any similar project. A teacher commented: "There wasn't anyone that wouldn't do it again, I don't think. They really liked it."

Another teacher commented:

"My best student liked being 'over his head.' He said, 'I really like this'. You know, the excitement was contagious and everybody got into it and they had fun."

Teachers were pleasantly surprised to discover how focused the students were:

"I almost never ever had to talk to a group and say, 'You know we're supposed to be working on the Millennium Project'."

Students were pleased with the attention they received in the school:

"They felt pleased at the notoriety. These kinds of kids [i.e., applied] don't get in the spotlight very much and so they felt very pleased. Plus they were a very endearing group and they wanted to do well. They wanted to work together and everything was going to be great, and it was."

Teachers commented that students began to acknowledge their own potential for accomplishment. Students were justifiably impressed with their own achievements:

"Once they got into the full swing of it, they realized what their limitations were and really how much more capable they were than what they thought they were. [Initially] they thought, 'Oh forget it, there's no way we're going to get through all this', and they were amazed at what they were able to come up with in 20 days, six weeks or whatever."

As a result, students did not want to work on anything else but the project.

The Millennium Project gave some students who normally did poorly with traditional pedagogy and assessment an opportunity to excel. Teachers' comments included the following:

"There was one boy who had the computer skills. So his marks jumped five or six per cent on this project."

"Students had an opportunity to see other students' work."

"I think the students were pretty impressed with their peer's work."

The Millennium Project empowered students. Students were given the opportunity to help develop rubrics and to choose their own working groups.

Finally, the Millennium Project pointed to new paradigms of knowledge. Performance-based assessment became an integrative act that asked students to synthesize the diversity of what they had learned and to apply it. This conceptual framework coincides with the constructivist perception (e.g., Dewey) of how knowledge is best acquired—that is, by active contact with that knowledge in context and use.

In the Millennium Project, then, the students were actively and authentically learning within a more meaningful, relevant and practical context. Learning took the form of students actively and interactively solving problems; people working together; students engaged in activities driven by "essential knowledge" that was meaningful to them; activities that were cross-disciplined and connected; and the public exhibition of their learning.

Concluding Comments

Overall, the Project's DesignTeam was pleased with the pilot phase of the Millennium Project. The year of intense planning, preparation and implementation had produced commensurate benefits. While that year of implementation provided only an intermittent view of a highly complex initiative, it became evident that the project showed much promise. There is undoubtedly still a considerable amount of work to be done before the next phase of the project.

The project was successful in engaging teachers in thinking and talking about the process of instruction and their assessment practices, consideration of what students should be expected to know and do and how schools can work successfully with others in the community. Throughout the project, there were many opportunities for both teachers and students to reflect, question and learn (Earl & LeMahieu, 1997). In essence, teachers saw first hand the potential available when letting students define and determine their own learning needs, styles and processes.

The project also presented a number of challenges for many teachers. While teachers globally are struggling to make sense of available alternative assessment choices within the current political climate of assessment innovations, teachers involved in the project soon discovered that performance-based assessment is a new world—requiring a new kind of literacy. Performance-based assessment, as viewed in this project, therefore, challenged teachers' understanding and interpretations about, and their professional experiences with, assessment. Consequently they struggled to implement innovative assessment practices into their classroom routines. The project resulted in profound and multi-faceted change and eagerness on the part of teachers to let us know about their efforts. In preparing for the next phase of implementation, a number of issues and concerns have been identified requiring further attention:

- the need for training in areas related to assessment, including how to report on student learning (e.g., should evaluation be anecdotal, pass/fail, levels, or a grade) and issues related to grading (e.g., group mark vs individual mark)
- the need to collect resources in advance, to make community contact in advance and to ensure the availability of appropriate research and presentation facilities
- the need to provide planned opportunities (e.g., in earlier grades through some sort of 'preservice') for students to acquire the skills to demonstrate student achievement successfully (e.g., research skills, presentation skills, time management skills, interview skills, phone skills)
- the need to address teachers' concerns about curriculum coverage so that they are not 'giving up' some of their curriculum;
- the need to provide exemplars to be used in conjunction with rubrics
- the need to facilitate collaboration with outside experts (i.e., librarians, community, businesses)
- the need to address issues of "control" (see Damian Cooper & Nanci Wakeman-Jones' article in this *Orbit* issue).

References

Dewey, J. (1980). *Art as experience*. NY: Perigee Books.

Earl, L. (1995). Assessment and accountability in education in Ontario. *Canadian Journal of Education, 20*(1), 45–58.

Earl, L. & LeMahieu, P.G. (1997). Rethinking assessment and accountability. In A. Hargreaves (Ed.), *ASCD Yearbook: Rethinking educational change with heart and mind*. VA: ASCD.

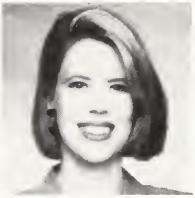
Fullan, M. (1991). *The new meaning of educational change*. NY: Teachers' College Press.

Hargreaves, A., et al. (1997). *Learning to change*. Toronto: OISE Press.

McDonald, J. et. al. (1992). *Graduation by exhibition: Assessing genuine achievement*. Alexandria, VA: Association of Supervision & Curriculum Development.

Stiggins, R. (1990). Toward a relevant classroom assessment research agenda. *Alberta Journal of Educational Research, 36* (1), 92–97.

Stiggins, R. (1997). *Student-centred classroom assessment*. NJ: Merrill.



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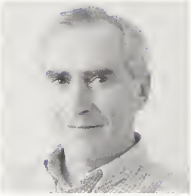

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STANDARDS AND PRINCIPLES

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Principles for Fair Student Assessment

This article is drawn from the *Principles for Fair Student Assessment Practices for Education in Canada*—a set of principles and related guidelines generally accepted by professional organizations as indicative of fair assessment practice within the Canadian educational context. Assessments depend on professional judgment; the principles and related guidelines highlighted below identify the issues to consider in exercising this professional judgment and in striving for the fair and equitable assessment of all students. The complete *Principles,* which contain information on summarizing and reporting results as well as presenting assessment information, are available from the Centre for Research in Applied Measurement and Evaluation at the University of Alberta.[1]

WORKING GROUP

The Principles for Fair Student Assessment Practices for Education in Canada was developed by a Working Group guided by a Joint Advisory Committee. The Committee included representation from the following organizations: Canadian Education Association, Canadian School Boards Association, Canadian Association for School Administrators, Canadian Teachers' Federation, Canadian Guidance and Counselling Association, Canadian Association of School Psychologists, Canadian Council for Exceptional Children, Canadian Psychological Association, and Canadian Society for the Study of Education, and the Provincial and Territorial Ministries and Departments of Education.

Financial support for the development and dissemination of the Principles was provided principally by the Walter and Duncan Gordon Charitable Foundation, with additional support provided by various faculties, institutes, and colleges of education and provincial and territorial ministries and departments of education in Canada.

I. Developing and Choosing Methods for Assessment

Assessment methods should be appropriate for and compatible with the purpose and context of the assessment.

Assessment method is used here to refer to the various strategies and techniques that teachers might use to acquire assessment information. These strategies and techniques include, but are not limited to, observations, text- and curriculum-embedded questions and tests, paper-and-pencil tests, oral questioning, benchmarks or reference sets, interviews, peer-and self-assessments, standardized criterion-referenced and norm-referenced tests, performance assessments, writing samples, exhibitions, portfolio assessment, and project and product assessments. Several labels have been used to describe subsets of these alternatives, with the most common being "direct assessment," "authentic assessment," "performance assessment," and "alternative assessment." However, for the purpose of the *Principles,* the term assessment method has been used to encompass all the strategies and techniques that might be used to collect information from students about their progress toward attaining the knowledge, skills, attitudes, or behaviours to be learned.

1. Assessment methods should be developed or chosen so that inferences drawn about the knowledge, skills, attitudes, and behaviours possessed by each student are valid and not open to misintepretation.

Validity refers to the degree to which inferences drawn from assessments results are meaningful. Therefore, development or selection of assessment methods for collecting information should be clearly linked to the purposes for which inferences and decisions are to be made. For example, to monitor the progress of students as proofreaders and editors of their own work, it is better to assign an actual writing task, to allow time and resources for editing (dictionaries, handbooks, etc.), and to observe students for evidence of proofreading and editing skills as they work than to use a test containing discrete items on usage and grammar that are relatively devoid of context.

2. Assessment methods should be clearly related to the goals and objectives of instruction, and be compatible with the instructional approaches used.

To enhance validity, assessment methods should be in harmony with the instructional objectives to which they are referenced. Planning an assessment design at the same time as planning instruction will help integrate the two in meaningful ways. Such joint planning provides an overall perspective on the

Planning an assessment design at the same time as planning instruction will help integrate the two in meaningful ways.

knowledge, skills, attitudes, and behaviours to be learned and assessed, and the contexts in which they will be learned and assessed.

3. When developing or choosing assessment methods, consideration should be given to the consequences of the decisions to be made in light of the obtained information.

The outcomes of some assessments may be more critical than others. For example, misinterpretation of the level of performance on an end-of-unit test may result in incorrectly holding a student from proceeding to the next instructional unit in a continuous progress situation. In such "high-stake" situations, every effort should be made to ensure the assessment method will yield consistent and valid results. "Low stake" situations, such as determining if a student has correctly completed an in-class assignment, can be less stringent. Low stake assessments are often repeated during the course of a reporting period using a variety of methods. If the results are aggregated to form a summary comment or grade, the summary will have greater consistency and validity than its component elements.

4. More than one assessment method should be used to ensure comprehensive and consistent indications of student performance.

To obtain a more complete picture or profile of a student's knowledge, skills, attitudes, or behaviours, and to discern consistent patterns and trends, more than one assessment method should be used. Student knowledge might be assessed using completion items; process or reasoning skills might be assessed by observing performance on a relevant task; evaluation skills might be assessed by reflecting upon the discussion with a student about what materials to include in a portfolio. Self-assessment may help to clarify and add meaning to the assessment of a written communication, science project, piece of art work, or an attitude. Use of more than one method will also help minimize inconsistency brought about by different sources of measurement error (for example, poor performance because of an "off-day"; lack of agreement among items included in a test, rating scale, or questionnaire; lack of agreement among observers; instability across time).

5. Assessment methods should be suited to the backgrounds and prior experiences of students.

Assessment methods should be free from bias brought about by student factors extraneous to the purpose of the assessment. Possible factors to consider include culture, developmental stage, ethnicity, gender, socio-economic background, language, special interests, and special needs. Students' success in answering questions on a test or in an oral quiz, for example, should not be dependent upon prior cultural knowledge, such as understanding an allusion to a cultural tradition or value, unless such knowledge falls within the content domain being assessed. All students should be given the same opportunity to display their strengths.

6. Content and language that would generally be viewed as sensitive, sexist, or offensive should be avoided.

The vocabulary and problem situation in each test item or performance task should not favour or discriminate against any group of students. Steps should be taken to ensure that stereotyping is not condoned. Language that might be offensive to particular groups of students should be avoided. A judicious use of different roles for males and females and for minorities and the careful use of language should contribute to more effective and, therefore, fairer assessments.

7. Assessment instruments translated into a second language or transferred from another context or location should be accompanied by evidence that inferences based on these instruments are valid for the intended purpose.

Translation of an assessment instrument from one language to another is a complex and demanding task. Similarly, the adoption or modification of an instrument developed in another country is often not simple and straightforward. Care must be taken to ensure that the results from translated and imported instruments are not misinterpreted or misleading.

II. Collecting Assessment Information

Students should be provided with a sufficient opportunity to demonstrate the knowledge, skills, attitudes, or behaviours being assessed.

Assessment information can be collected in a variety of ways (observations, oral questioning, interviews, oral and written reports, paper-and-pencil tests). The guidelines which follow are not all equally applicable to each of these procedures.

1. Students should be told why assessment information is being collected and how this information will be used.

Students who know the purpose of an assessment are in a position to respond in a manner that will provide information relevant to that purpose. For example, if students know that their participation in a group activity is to be used to assess cooperative skills, they can be encouraged to contribute to the activity. If

When students know that the purpose of an assessment is to diagnose strengths and weaknesses,...they can be encouraged to reveal weaknesses as well as strengths.

students know that the purpose of an assessment is to diagnose strengths and weaknesses rather than to assign a grade, they can be encouraged to reveal weaknesses as well as strengths. If the students know that the purpose is to assign a grade, they are well advised to respond in a way that will maximize strengths. This is especially true for assessment methods that allow students to make choices, such as with optional writing assignments or research projects.

2. An assessment procedure should be used under conditions suitable to its purpose and form.

Optimum conditions should be provided for obtaining data from and information about students so as to maximize the validity and consistency of the data and information collected. Common conditions include such things as proper light and ventilation, comfortable room temperature, and freedom from distraction (e.g., movement in and out of the room, noise). Adequate workspace, sufficient materials, and adequate time limits appropriate to the purpose and form of the assessment are also necessary. For example, if the intent is to assess student participation in a small group, adequate work space should be provided for each student group, with sufficient space between subgroups so that the groups do not interfere with or otherwise influence one another and so that the teacher has the same opportunity to observe and assess each student within each group.

3. In assessments involving observations, checklists, or rating scales, the number of characteristics to be assessed at one time should be small enough and concretely described so that the observations can be made accurately.

Student behaviours often change so rapidly that it may not be possible simultaneously to observe and record all the behaviour components. In such instances, the number of components to be observed should be reduced and the components should be described as concretely as possible. One way to manage an observation is to divide the behaviour into a series of components and assess each component in sequence. By limiting the number of components assessed at one time, the data and information become more focused, and time is not spent observing later behaviour until prerequisite behaviours are achieved.

4. The directions provided to students should be clear, complete, and appropriate for the ability, age and grade level of the students.

Lack of understanding of the assessment task may prevent maximum performance or display of the behaviour called for. In the case of timed assessments, for example, teachers should describe the time limits, explain how students might distribute their time among parts for those assessment instruments with parts, and describe how students should record their responses. For a portfolio assessment, teachers should describe the criteria to be used to select the materials to be included in a portfolio, who will select these materials, and, if more than one person will be involved in the selection process, how the judgments from the different people will be combined. Where appropriate, sample material and practice should be provided to further increase the likelihood that instructions will be understood.

5. In assessments involving selection items (e.g., true/false, multiple choice), the directions should encourage students to answer all items without threat of penalty.

A correction formula is sometimes used to discourage "guessing" on selection items. The formula is intended to encourage students to omit items for which they do not know the answer rather than to "guess" the answer. Because research evidence indicates that the benefits expected from the correction are not realized, the use of the formula is discouraged. Students should be encouraged to use whatever partial knowledge they have when choosing their answers, and to answer all items.

6. When collecting assessment information, interactions with students should be appropriate and consistent.

Care must be taken when collecting assessment information to treat all students fairly. For example, when oral presentations by students are assessed, questioning and probes should be distributed among the students so that all students have the same opportunity to demonstrate their knowledge. While writing a paper-and-pencil test, a student may ask to have an ambiguous item clarified, and, if warranted, the item should be explained to the entire class.

7. Unanticipated circumstances that interfere with the collection of assessment information should be noted and recorded.

Events such as a fire drill, an unscheduled assembly, or insufficient materials may interfere in the way in which assessment information is collected. Such events should be recorded and subsequently considered when interpreting the information obtained.

8. A written policy should guide decisions about the use of alternate procedures for collecting assessment information from students with special needs and students whose proficiency in the language of instruction is inadequate for them to respond in the anticipated manner.

It may be necessary to develop alternative assessment procedures to ensure a consistent and valid assessment of those students who, because of special needs or inadequate language, are not able to respond to an assessment method (for example, oral instead of written format, individual instead of group administered, translation into first language, providing additional time). The use of alternate procedures should be guided by a written policy developed by teachers, administrators, and other jurisdictional personnel.

III. Judging and Scoring Student Performance

Procedures for judging or scoring student performance should be appropriate for the assessment method used and be consistently applied and monitored.

Judging and scoring refers to the process of determining the quality of a student's performance, the appropriateness of an attitude or behaviour, or the correctness of an answer. Results derived from judging and scoring may be expressed as written or oral comments, ratings, categorizations, letters, numbers, or as some combination of these forms.

1. Before an assessment method is used, a procedure for scoring should be prepared to guide the process of judging the quality of a performance or product, the appropriateness of an attitude or behaviour, or the correctness of an answer.

To increase consistency and validity, properly developed scoring procedures should be used. Different assessment methods require different forms of scoring. Scoring selection items (true/false, multiple choice, matching) requires the identification of the correct or, in some instances, best answer. Guides for scoring essays might include factors such as the major points to be included in the "best answer" or models or exemplars corresponding to different levels of performance at different age levels and against which comparisons can be made. Procedures for judging other performances or products might include specification of the characteristics to be rated in performance terms and, to the extent possible, clear descriptions of the different levels of performance or quality of a product.

2. Before an assessment method is used, students should be told how their responses or the information they provide will be judged or scored.

Informing students prior to the use of an assessment method about the scoring procedures to be followed should help ensure that similar expectations are held by both students and their teachers.

3. Care should be taken to ensure that results are not influenced by factors that are not relevant to the purpose of the assessment.

Various types of errors occur in scoring, particularly when a degree of subjectivity is involved (e. g., marking essays, rating a performance, judging a debate). For example, if the intent of a written communication is to assess content alone, the scoring should not be influenced by stylistic factors such as vocabulary and sentence structure. Personal bias errors are indicated by a general tendency to rate all students in approximately the same way (e. g., too generously or too severely). Halo effects can occur when a rater's general impression of a student influences the rating of individual characteristics or when a previous rating influences a subsequent rating. Pooled results from two or more independent raters (teachers, other students) will generally produce a more consistent description of student performance than a result obtained from a single rater. In combining results, the personal biases of individual raters tend to cancel one another.

4. Comments formed as part of scoring should be based on the responses made by the students and presented in a way that students can understand and use them.

Comments, in oral and written form, are provided to encourage learning and to point out correctable errors or inconsistencies in performance. In addition, comments can be used to clarify a result. Such feedback should be based on evidence pertinent to the learning outcomes being assessed.

5. Any changes made during scoring should be based upon a demonstrated problem with the initial scoring procedure. The modified procedure should then be used to rescore all previously scored responses.

Anticipating the full range of student responses is a difficult task for several forms of assessment. There is always the danger that unanticipated responses or incidents that are relevant to the purposes of the assessment may be overlooked. Consequently, scoring should be continuously monitored for unanticipated responses and these responses should be taken into proper account.

6. An appeal process should be described to students at the beginning of each school year or course of instruction that they may use to appeal a result.

Situations may arise where a student believes a result incorrectly reflects his/her level of performance. A procedure by which students can appeal such a situation should be developed and made known to them. This procedure might include, for example, checking for addition or other recording errors or, perhaps, judging or scoring by a second qualified person.

References

Code of Fair Testing Practices for Education. (1988). Washington, D.C.: Joint Committee on Testing Practices.

Guidelines for Educational and Psychological Testing. (1986). Ottawa, Ont.: Canadian Psychological Association.

Standards for Teacher Competence in Educational Assessment of Students. (1990). Washington: D.C.: American Federation of Teachers, National Council on Measurement in Education, and National Educational Association.

NOTE

The members of the Working Group and Joint Advisory Committee who developed the Principles for Fair Student Assessment Practices for Education in Canada were: Marvin Betts, Gary Broker, Clement Dassa, Dick Dodds, Tom Dunn, Bob Gilchrist, Nicholas Head, Douglas Hodgkinson, Barbara Holmes, Michael Jackson, Jean Pettifor, Michel Laurier, Sharon Robertson, Romulo Magsino, Tom Maguire, Linda McAlpine, Allan McDonald, Stirling McDowell, Craig Melvin, Kathy Oberle, Frank Oliva (Chair, Working Group and Joint Advisory Committee), Todd Rogers, Don Saklofske, Marvin Simner, Marielle Simon, Ross Traub, Sue Wagner and Kim Wolff.

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Standards of Practice and Classroom Assessment

Fran Squire, Allan Craig, and

Doug Wilson

Standards of Practice and classroom assessment? What is the connection for me as an educator? What do the *Standards of Practice for the Teaching Profession* have to say about student assessment? In answering these questions, we will focus on the mandate of the Ontario College of Teachers and its role as the self-regulatory body for the teaching profession. We begin by setting a background context for the College, describing what the standards are and what they are not, and outline how assessment is addressed in the standards of practice.

The Ontario College of Teachers was created in 1996 to license, govern and regulate the practice of teaching in the province. The 175,000 members of the College include classroom teachers, administrators, superintendents, and those who hold Ontario teaching qualifications in other educational organizations. An important part of the College's mandate is to provide leadership to the profession in developing standards of practice, ethical standards, and a framework for career long professional learning. The *Standards of Practice for the Teaching Profession*, developed over the past two years with substantial input from educators and the public, are organized in five statements. Key elements expand on and describe each of these statements. (see chart).

What do the standards of practice have to do with me?

As a self-regulatory body, the Ontario College of Teachers must articulate for its members and the public what it is that makes the teaching profession unique. What knowledge, skills, and values do teachers have as professionals? Why can't any other caring adult who has a university degree be designated "a teacher"? Professional self-regulatory bodies use the term "standards of practice" to refer to the *descriptors* which answer these questions.

> *As professionals, College members must know multiple ways to assess and evaluate students.*

The standards of practice, developed for the teaching profession, are interdependent descriptors for the profession as a whole. For example, the College has legislative responsibility for the accreditation of pre-service programs at the faculties of education. This process ensures that pre-service programs are designed to support the *Standards of Practice for the Teaching Profession*. As a second example, the College will also accredit in-service professional learning programs within Regulation 184/97. This regulation includes programs such as the Additional Qualification courses and Principal's Qualification Program. An important function of the standards of practice, then, is to assure, through the accreditation process, quality professional learning for College members.

Although the standards of practice are descriptors for the profession, individuals also personalize the standards and recognize themselves and the work they do as educators. Many members of the College are using the standards to reflect on their practice and plan their own professional growth.

Can the *Standards of Practice for the Teaching Profession* be used in performance appraisals of teachers and administrators?

Performance appraisal remains the responsibility of the employer. The standards of practice were not developed to be criteria for the evaluation of individual members. They are broad descriptors for the profession, not a checklist of competency skills to be measured. On the other hand, the College is aware that the standards are being considered as a foundation by some employers as their appraisal policies and procedures are reviewed.

As written, the standards are not specified in detail for the varying roles within the profession, nor do they describe individual contexts. All educators are encouraged to understand and extend the standards within their specific roles, using them as a guide for their professional growth and practice. What do the standards say about this professional growth and practice in the area of classroom assessment?

What do the *Standards of Practice for the Teaching Profession* say about classroom/ student assessment?

Specific references to assessment are found in the key elements of Professional Knowledge and Teaching Practice. These elements describe the general expectations for teaching within the field of student assessment.

Professional Knowledge

Members of the Ontario College of Teachers know ways to:

(a) assess and evaluate student learning, student approaches to learning and the

STANDARDS OF PRACTICE FOR THE TEACHING PROFESSION

Commitment to Students and Student Learning

Members of the Ontario College of Teachers demonstrate care for and commitment to students. They are dedicated to engaging and supporting student learning. Teachers treat students equitably and with respect. They encourage students to grow as individuals and as contributing members of society. Teachers assist students to become life-long learners.

Professional Knowledge

Professional knowledge is the foundation for teaching practice. Members of the Ontario College of Teachers know the curriculum, the subject matter, the student, and teaching practice. They know education-related legislation, methods for communication, and ways to teach in a changing world.

Teaching Practice

Members of the Ontario College of Teachers apply professional knowledge and understanding of the student, curriculum, teaching, and the changing context of the learning environment to promote student learning. They conduct ongoing assessment and evaluation of student progress. Teachers modify and refine teaching practice through continuous reflection.

Leadership and Community

Members of the Ontario College of Teachers are educational leaders who create and sustain learning communities in their classrooms, in their schools, and in their profession. They collaborate with their colleagues and other professionals, with parents, and with other members of the community to enhance school programs and student learning.

Ongoing Professional Learning

Members of the Ontario College of Teachers are learners who acknowledge the interdependence of teacher learning and student learning. Teachers engage in a continuum of professional growth to improve their practice.

achievement of curriculum expectations;

Teaching Practice

Assessment and evaluation of students

Members of the Ontario College of Teachers:

(a) communicate clear, challenging and achievable expectations for students;
(b) gather data on student performance using a variety of assessment strategies;
(c) keep a continuous and comprehensive record of group and individual achievement; and
(d) report and provide ongoing feedback of individual achievement to students and parents.

The purpose, then, of the *Standards of Practice for the Teaching Profession* is to outline broad areas and underlying principles of assessment from which teachers may expand the details for their particular role and in their particular context. During the development and writing of the standards, educators described what was important to them in the area of student assessment. Many teachers across Ontario identified key elements and how they were integrated into their teaching practice. Much of this input was supported by current literature and research on classroom assessment as the standards document was created.

Teachers also reported a strong connection between assessment and *ongoing professional learning*. They stated that their current professional learning was often focussed on expanding their repertoire of assessment strategies and communicating to parents the new strategies and results of initiatives such as the EQAO testing. This professional learning involves formal courses and collaborative "learning in practice" strategies such as mentoring, action research and school improvement plans.

How are College members interpreting assessment in the standards of practice?

An elementary principal in one of the College's research case studies captures the essence of what the standards say about classroom/student assessment.

"The Standards are almost a blueprint to help me in my job in supporting teachers in what they do—inside a classroom. My philosophical belief is that planning and student assessment is the key to student achievement. This is truly an outline for how I can help teachers help students to achieve the curriculum expectations that are expected of us."

A teacher candidate in a pre-service program articulates her understanding of the links between classroom assessment and the standards of practice.

"Assessment and evaluation play a very significant role in the teaching profession, and I learned how to effectively communicate clear and challenging expectations to my students. I used a variety of assessment strategies throughout the unit and kept a continuous record of group and individual work samples. My students were given clear expectations which I know kept them focussed, motivated, and goal-orientated towards working at the level 3 and 4 expectations. Rubrics provide students with the foundation to know what is expected of them and to become self-directed in their learning."

An experienced teacher uses the standards of practice as she thinks about accountability and communicating student achievement to parents.

"I'm thinking about doing report cards and how to get my whole program together so that when I am presenting assessment and evaluation to parents and students, I have something that`s ongoing and its consistent. They can see where I'm coming from and how the steps follow. Some of my colleagues have taken this on and it looks great and it links directly into the standards as well."

From the preliminary research in terms of validating the standards, it has been interesting to note how assessment is currently a high priority for educators. For example, Additional Qualification course participants have requested a greater emphasis on classroom assessment being encorporated into course design. The significance of ongoing professional learning regarding assessment at the school and system levels is reflected in part by the articles within this special issue of *Orbit* that highlight specific assessment strategies.

Returning to the opening questions, classroom assessment is an integral part of the *Standards of Practice for the Teaching Profession*, as outlined in the key elements. As professionals, College members must know multiple ways to assess and evaluate students. They must be able to carry out in practice the skills of data gathering, record keeping, communicating clear expectations, and reporting achievements to students and parents. The *Standards of Practice for the Teaching Profession* provide a foundation for pre-service and in-service programs ensuring that both new and experienced teachers acquire the knowledge, skills and values related to student assessment. The standards provide a common language for members at all phases in their professional careers to "assess" their assessment practices. By determining their own routes of professional learning teachers can make the professional decisions about changes in practice that enhance student learning, and in doing so, reinforce the most important standard, *commitment to students and student learning.*

Allan Craig, Fran Squire and Doug Wilson

Fran Squire and Allan Craig are Program Officers of the Professional Affairs Department. Doug Wilson is Manager, Standards of Practice and Education Unit, Ontario College of Teachers.

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The Learning Consortium is inviting presentation proposals for our **7th annual Assessment and Learning Conference** to be held at the Sheraton Centre in downtown Toronto, **Friday, February 2 and Saturday, February 3, 2001.**

This year's conference theme is QUALITY LEARNING ENVIRONMENTS. **The strands** of this theme are:

1. Building the bridge between curriculum and learning to assessment and reporting.
2. Multiple intelligences and the individual learner.
3. The assessment literate school (elementary & secondary).
4. Effective team players (the role of principal, teacher & student).
5. Preparing for high stakes testing (a brain based teaching approach).
6. The motivational learner.

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The breakout sessions will deliver practical approaches to building quality learning learning environments around the above themes. We are asking keynote speakers to offer a breakout session also and/or to be available at the close of the day to bring it all together in an interactive feedback or panel session.

Keynote speakers are yet to be confirmed but will include **Ruth Sutton, Dr. Rick Stiggins** and **Dr. Carol Rolheiser.**

If you are interested in being considered as presenter at our conference, please call us at (416) 923-6641 x 6812 by **July 15, 2000** to receive a "Call for Presenters" form.

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Moving Towards A Culture of Assessment

Linda Arlidge, Nancy Broad,
Charlie Craig, Vidya Jaisaree,
Janet Lewis, and Beate Planche

> *"... we must rely on a combination of high quality standardized tests and high quality classroom assessment... only through this combination can we bring the true power of assessment to bear in the pursuit of educational excellence. ..."* —Rick Stiggins

In this article we will summarize our experiences as we embark on a journey to create a culture of assessment in every classroom of our board. We will explore the thoughts of principals and teachers who are becoming assessment literate and are beginning to question their assessment practices and to challenge their colleagues to do the same. We will briefly outline our board's action plan, our progress, and our challenges.

Commitment

Considering the role of the EQAO in providing large-scale assessment information and recognizing the power of, and need for, high-quality classroom assessment, the York Region District School Board underscored its commitment to creating a culture of assessment by assigning a principal to the position of Assessment and Evaluation Project Leader last February (1999). This person was charged with the task of implementing a regional Assessment Training Program (ATP) and leading the development of:

- a board policy on assessment and a profile of assessment competencies for teachers and administrators
- a resource kit of assessment literature and guides to support the development and use of effective assessment practices
- instruments which would enable teachers and school administrators to assess their level of implementation of effective assessment practices
- school-based learning teams that would support the development of assessment literacy in their schools

Vision

We began our journey by articulating a vision for effective assessment practices in our schools where "every teacher and principal invests the time and energy needed to become assessment literate, and to develop the skills necessary to ensure that all classroom assessments meet the *Guiding Principles and Standards of High Quality Assessment*."

The Plan Takes Shape

A key aspect of our two-year action plan was the creation of a leadership team consisting of one teacher and one administrator from each of seven schools across the board (four elementary and three secondary). In the first year, while we were developing the ATP, members of our team would, through professional development, personal study, and interaction and reflection with their colleagues, develop high levels of assessment literacy. They also provided leadership to others on their school learning teams, and they developed and piloted materials to support the use of sound assessment practices in their classrooms. During the first year, an assessment policy was developed, and awareness sessions conducted for teachers and administrators regarding the goals and plans for the ATP.

In the second year of the plan, the leadership team will share their learning and school-level experience with other schools across the board as they begin a similar process.

System Awareness

In an effort to highlight some of the assessment issues and challenges we face, and in order to begin to share our plans related to developing a culture of assessment, we conducted a two-day Summer Institute entitled *Assessment and Evaluation: Putting the Pieces Together*. The institute opened with a dynamic keynote presentation by Dr. Tom Guskey who challenged us to use assessment to promote student learning. The institute, offering over 60 workshops, was well attended and received by all participants. After staff returned to their schools in September, teachers and administrators were still talking about and requesting readings and resource materials related to the topic of assessment.

The Leadership Team: A Progress Report

Members of the leadership team met for the first time in May 1999, and since then have met every two weeks for a half-day. Our first goal was for each of us to develop a high level of assessment literacy, and to that end, we spent an enormous amount of time reading everything we could find related to assessment. Names like Stiggins, Wiggins, McTighe, Guskey, O'Connor, and Earl and Cousins became commonplace in our vocabulary. We were fortunate to have had the support of the board and were able to send almost all of the members of our team to the Assessment Training Institute Conference in Portland

Oregon. The Chairman of the Board attended the conference with us and is a regular participant in our bi-weekly meetings.

School Learning Teams: One Goal, Many Pathways

As part of the ATP, each administrator and teacher on the leadership team was to establish an assessment learning team in their school. The teams were to consist of four to eight volunteers who were interested in increasing their levels of assessment literacy, questioning their assessment practices and trying new materials and methods in their classrooms. Once established, these teams conducted self-assessments, established operating norms and a meeting schedule based on their needs and goals. Once in operation, these school teams regularly made decisions regarding when and how to involve the whole staff in their journey.

As we move forward with our school level assessment learning teams, we are finding that there is only one constant in this process, and that is our overall goal. The structure and process vary as much in each school as does the membership on each of the teams. For example, at one school we have a team consisting mainly of department heads, while at another school there is greater representation of teachers from one particular division and in a third school the team includes parents who regularly attend the meetings and learn along with the staff members on the team.

The Leadership Team: Some Personal Reflections

Personal reflection is an ongoing component of the learning team process. Participants on the leadership team regularly reflect on their experiences and personal learning. One administrator commented:

"The opportunity to reflect on our assessment and evaluation practices has been stimulating, humbling and energizing. We have so much to learn about the potential of assessment as a learning tool...Some of my own instincts about the process of gathering and using data to guide teaching and learning were headed in the right direction. But I also realized that as a teacher I had not involved my students enough in the process of self-evaluation, in the practice phase of learning, in opportunities to relearn, and I doubt that I always set clear targets for my students to reach."

GUIDING PRINCIPLES

1. The primary purpose of assessment is to improve student learning.
2. Assessment practices are fair and equitable for all students.
3. Communication about assessment is on-going, clear and meaningful.
4. Professional development and collaboration support assessment.
5. Partners in education are involved in the assessment process.
6. Assessment practices are regularly reviewed and refined.

STANDARD OF HIGH QUALITY ASSESSMENT—EDUCATORS:

1. align assessment with the expectations outlined in the Ontario Curriculum;
2. use methods that are appropriate to the achievement targets;
3. provide students with multiple and varied opportunities to demonstrate achievement;
4. control for all relevant sources of bias and distortion that can lead to inaccurate assessment;
5. collect sufficient information to make informed decisions; and
6. use results to make decisions about program and instruction.

Excerpts from *Curriculum Expectations for York Region Schools, A Curriculum Framework 1999.*

A principal commented:

"Hearing Tom Guskey speak and reading Ken O'Connor came at the perfect time for me...they provided me with signposts to guide my inquiries. I set aside my personal and professional beliefs and biases and read the theory. I attended the workshops with an open mind and gradually began to link my new learning about assessment and evaluation with my former beliefs. What I have come to understand and articulate is that there are better strategies to use so that all students remain connected with their learning...so that all students can succeed in school."

One teacher noted:

"I realized through my readings that I knew some aspects of proper assessment, but still had a long way to go. I guess you could say that I now know what I do not know! I realize that this will be a process that will continue beyond my work on this team, but I know I will continue to read, research and apply the assessment principles I am learning."

The School Experience: The Reality and the Challenge

As members of the leadership team continue to work with their respective school learning teams and staff members they are faced with a variety of challenges.

One teacher member of the leadership team commented on her experiences as part of the school learning team:

"The greatest challenge is to switch to the new paradigm...We are learning together how to create rubrics with our students and create sound performance assessments for our classrooms. It will require years of training for teachers to become assessment literate and apply the principles of assessment in the classroom, but we are on our way."

Reflecting on her experiences in this learning process, one administrator noted:

"Working on the school learning team at the school level has raised the level of dialogue—from teachers justifying what they are doing to explaining what they are doing in the area of assessment. The team has raised the awareness of the need to re-examine and challenge many of the assumptions that we have made about the assessment-instruction link. The mere idea that we are able to shift the focus from 'I taught it but they didn't learn it' to 'How can I teach it to them so that they get it?' has been a huge paradigm shift."

Reflecting further, the same administrator noted: "It is important to begin with what teachers are already doing and encourage thoughtful reflection on their practices. This is what takes time, but to do otherwise would risk teachers viewing it as just another fad that will pass."

Another administrator also commented on the rate of progress at the school level:

"The process of supporting a school learning team, while very purposeful and satisfying, is one that is evolving more slowly than I first envisioned. My teacher partner and I are enthusiastic about our task and want to share and learn with our teachers; however, the reality of finding quality time together is a challenge. Supporting a school learning team is best seen as a long-term project and process."

Linking Assessment and School Planning

While developing assessment literacy is a worthy goal, it is of little value if disconnected from the school planning process. One administrator commented on the connection between assessment and her school plan:

"At our school, we already have a school plan in place which focuses on continually improving student learning. In order to ensure that what I am asking of teachers is both manageable and practical, I have aligned all of our work related to classroom assessment and professional development with the school planning process. At the beginning of the year, teachers used diagnostic assessments to obtain baseline data, and professional development at that time focused on the diagnostic and analysis processes."

She continued to say:

"School-level professional development for all teachers occurs at monthly meetings, with the exception that teachers rethink some of their practices and explore different ways to assess learning as part of their day-to-day teaching. At the same time, members of the school assessment learning team are examining other pieces of the assessment puzzle through personal study and regular meetings. They are also working in small groups to develop assessment tools for all staff to assess student performance of the short-term goals identified in our school plan."

"We began our journey by articulating a vision for effective assessment practices in our schools..."
– the Leadership Team

Initiatives from the Field

We have found, over the past few months, a growing interest in learning about assessment and as a result the following assessment activities have been initiated in "the field." Firstly, a principal professional development planning committee consisting of elementary school administrators identified assessment as their professional development focus for the year.

Three professional development sessions focusing on classroom assessment were developed and, although school members of our leadership team had not anticipated being involved in providing regional professional development until next year, they met with rave reviews as they shared their experiences with administrators at a session in January 2000.

A second development was the creation of an assessment study group consisting of elementary school administrators. This grass roots initiative facilitated by an administrator has resulted in biweekly meetings that have focused on assessment. As word of this initiative has spread throughout the system, three more assessment study groups for administrators have been created.

Summary

As we move towards building a culture of assessment in York Region we realize that our work has just begun. Although we have moved more quickly than anticipated in the area of administrator awareness and commitment, in other areas we are moving more slowly.

The experiences of the leadership team, over the past eight months, have allowed members to experience the learning team process themselves. It has also provided them with an opportunity to conduct an ongoing evaluation of the professional development that is occurring at the school level in order to discern its impact. Reflecting on these experiences, we are confident that the learning team approach to professional growth is taking us in the right direction.

Learning teams in York Region are here to stay. In the words of one administrator:

"We value what our teachers have been doing in the area of assessment. We emphasize that we are learning and working together to build a culture of assessment, and we need to do this well. While it may take us some time to get there, we are confident that we can do it!"

References

Earl, L. & Cousins. J.B. (1995). *Classroom assessment: Changing the face, facing the change.* Mississauga: Ontario Public School Teachers Federation.

Stiggins, R.J. (1998) *Leadership for excellence in assessment.* Portland Oregon. Assessment Training Institute.

York Region District School Board. (1999). *Curriculum expectations for York Region schools; A curriculum framework,* Aurora, Ontario.

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Supporting Effective Classroom Assessment and Evaluation Practices

Assessment and evaluation practices are undergoing rapid change in Ontario. Teachers often have questions about the educational rationale for the changes and about what effective assessment and evaluation looks like in the classroom. They need ongoing professional development opportunities to learn, practice and share their knowledge and skills.

With a reduction in school district staff development resources, providing ongoing professional development opportunities has become the challenge of formal and informal school leaders. They are creating school-based staff learning programs to help teachers develop the knowledge and skills necessary to maintain and improve the quality of the teaching and learning.

These realities pose implementation challenges for schools and boards. What needs to be in place to ensure a consistent, aligned and equitable approach from school to school?

The Halton District School Board has developed *Guidelines for Assessment and Evaluation of Student Achievement*. The guidelines, based on Ministry of Education assessment and evaluation policy, focus on the improvement of student learning. They provide a framework to help ensure that assessment and evaluation practices are fair, consistent, and used appropriately in all schools in Halton. They can be used at the school level to assist teachers in professional learning and planning for growth.

The Guidelines contain a set of twenty Principles, which address the most important issues involving assessment and evaluation in our elementary and secondary schools. Each Principle includes:

> *The self-assessment tool reinforces the concept that "implementation is a process and not an event."*

Key Messages—These explain the "must do's" and the details related to each principle. They provide direction about routines to be followed.

Burning Questions—These raise the difficult issues related to each Principle. They may address teacher, student, parent or administrative issues.

Effective Practice—Accompanying each Principle are examples of what you might see in a classroom where the Principle is being fully implemented. The examples describe both elementary and secondary situations.

In addition to the Principles, the document provides teachers with an Assessment and Evaluation Self-Assessment and a template to develop a Plan for Professional Growth. The self-assessment tool was developed to provide teachers with a clear picture of what they need to know and be able to do as they implement the assessment evaluation policy and related classroom practices. It is an implementation profile with criteria and performance indicators. The criteria have been set up as questions. Teachers reflect on the questions and determine the extent to which they have implemented the criteria by examining the related performance descriptors under each implementation stage.

The self-assessment tool reinforces the concept that "implementation is a process and not an event." The profile is provided for teachers to gauge their progress towards best practice in assessment and evaluation and help them plan future professional growth.

NOTE

The rubric for Halton's *Guidelines for Assessment and Evaluation of Student Acievement* is reproduced on pages 30-31. It was written by: Damian Cooper, Jeff Catania, Keith Clark, Ruth Dawson, Heather Gataveckas, Mary Marshall, Libby Stephenson and Nanci Wakeman-Jones.

MAKING THE SHIFT IN ASSESSMENT AND EVALUATION WHAT IS HAPPENING IN YOUR SCHOOL?

Criteria Phases	Awareness	Preparation	Practice	Mastery Integration
Are my assessment and evaluation practices tied to the provincial curriculum?	↘ aware of provincial curriculum document, but not familiar with it ↘ assessment practices may or may not match curriculum expectations ↘ provincial achievement levels are not the reference point for evaluation	↘ have read the document ↘ beginning to develop assessment practices that match the curriculum expectations ↘ provincial achievement levels are beginning to be used as reference points for evaluation	↘ know the document well ↘ most assessment practices match the curriculum expectations ↘ provincial achievement levels are regularly used as reference points for evaluation	↘ very familiar with document, know it cold ↘ reflect on and refine assessment practices to match curriculum expectations ↘ the most consistent provincial achievement level demonstrated by a student is recorded
Do I communicate assessment criteria and feedback effectively?	↘ no written criteria, vague criteria or criteria not known to students until work is marked ↘ feedback is given upon the completion of work ↘ no opportunity for student improvement	↘ have specific written criteria for work, but it is not shared with students at the outset ↘ feedback is irregular, or only at grading times ↘ limited opportunity for student improvement	↘ specific criteria is shared with students *before* work is started (i.e., they know the targets) ↘ feedback is given regularly before work is completed ↘ good opportunity for student learning	↘ students have some opportunity to provide input into assessment criteria ↘ feedback is frequent in formal and informal modes ↘ best opportunity for student learning
Do I use a balanced variety of assessment methods, tools and strategies?	↘ unaware of different forms of assessment ↘ most or all assessment is done at the end of the learning (summative) ↘ only grade the pro-ducts of student work	↘ know a variety of methods, but use mostly one (i.e., paper & pencil) ↘ assessment opportunities with feedback are given during the learning phase as well, (formative) grade product, and provide only informal oral feedback on process as students work	↘ use all methods (paper & pencil, performance and personal communication) but in an unbalanced way ↘ some assessment is also done to help plan teaching (diagnostic) ↘ assess and evaluate both the product and process of student work	↘ assessment methods and tools fit naturally with what is being assessed ↘ emphasize diagnostic, formative or summative assessment depending on which is appropriate ↘ process and product assessed using best tool and balance between the two depends on student age and curriculum expectations
Do I separate learning skills from student achievement?	↘ unaware of what the learning skills are or evidence is not gathered for learning skills	↘ learning skills are assessed only informally and graded purely subjectively (i.e., little evidence gathered if any) ↘ learning skills "types" of marks are factored into achievement grades (i.e., homework completion)	↘ evidence of learning skills is collected using appropriate tools ↘ achievement grades reflect purely achievement and learning skills grades are based on clear evidence	↘ students' learning skills are assessed in a variety of ways, at multiple times, based on the most consistent level reached and reported separately from achievement

Making the Shift in Assessment and Evaluation...What is Happening in your School?..cont'd

Criteria Phases	Awareness	Preparation	Practice	Mastery Integration
Do I promote (not discourage) learning by using assessment and evaluation practices that:	➘ are not unexpected surprises ➘ allow students to demonstrate and celebrate their learning ➘ provide specific, timely feedback telling students how to improve ➘ engage and motivate students by relating to the real world and being as fun as possible ➘ do not involve prior conceptions of students' abilities ➘ use late penalties fairly and consistently when appropriate ➘ consider a student's most consistent achievement (i.e., not factoring in "zeroes") ➘ weight grades according to the proportion of the curriculum documents they represent, not the denominator of the mark ➘ treat cooperative group situations with care			
	➘ few of the above apply to my practice (0-2 checks)	➘ some of the above apply to my practice (3-4 checks)	➘ most of the above apply to my practice (5-7 checks)	➘ all or almost all of the above apply to my practice (8-9 checks)
Are my grading practices based on sufficient evidence of achievement?	➘ grades are based on one opportunity which students had to demonstrate learning for each given expectation	➘ grades are based on multiple opportunities to demonstrate learning which are all averaged together, including diagnostic "first tries"	➘ grades are based on multiple opportunities to demonstrate learning in a variety of contexts, without counting first tries or the odd missed assessment	➘ grades are based on the most consistent demonstration of learning a student has shown, with some assessments that group expectations to provide evidence in multiple areas
Do I involve the students (and others) in my assessment and evaluation practice?	➘ the teacher is the sole assessor and evaluator ➘ students are not involved in the determination of criteria of the comparison of achievement to the criteria	➘ students' self and peer assessments about their own learning are considered to help corroborate the teacher's assessment	➘ students learn about objectivity, discretion, accuracy, consistency, etc; to improve self and peer assessment ➘ appropriate tools are provided to facilitate self and peer assessment	➘ a balance of self, peer and/or teacher assessments are used when appropriate ➘ students help develop tools and criteria ➘ parents or subject experts have opportunities to provide students with feedback
Do I modify my assessment and evaluation practices appropriately for students with special needs?	➘ aware of the ways assessment is modified: by tool (e.g. oral test instead of written), breadth, depth, time, etc.	➘ beginning to modify assessments based on students' needs	➘ modifying assessments based on students' needs using a range of modifications	➘ routinely modify assessments appropriately for a wide variety of needs and employ student records and support staff to help
Are my assessment and evaluation practices sensitive?	➘ in planning and reflecting on my practice, I would rarely consider racial, social, financial, cultural, religious, gender or confidentiality issues that may affect student learning	➘ in planning and reflecting on my practice, I sometimes consider racial, social, financial, cultural, religious, gender or confidentiality issues that may affect student learning	➘ in planning and reflecting on my practice, I often consider racial, social, financial, cultural, religious, gender or confidentiality issues that may affect student learning	➘ in planning and reflecting on my practice, I consistently consider racial, social, financial, cultural, religious, gender or confidentiality issues that may affect student learning

3

TOOLS AND STRATEGIES

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Carol Rolheiser and John Ross

Student Self-Evaluation— What Do We Know?

Teachers today are experimenting with alternatives to traditional tests. Performance assessment, portfolio collections, classroom observation, peer assessment, and self-evaluation are joining the unit test and the final exam in the repertoire of the skillful teacher. Such teachers ensure that an over-reliance on testing does not seriously distort instruction or impede important school improvement efforts. Accordingly, their programs are based on a range of assessment approaches, including authentic assessment. Teachers who include authentic assessment in their repertoires are driven by a belief that curriculum-assessment experiences should prepare students for life in the real world.

While teacher-made tests and standardized tests give us information about student learning, they do not provide all the information. Alternative forms of assessment can generate that other information. Shulman's term "a union of insufficiencies" is a very compelling notion in thinking about the relationship between tests and other forms of assessment. Various methods of assessment need to work together so that the "strengths of one offset the limitations of the others" (Skylight, 2000, p. 23). No single method or tool can provide all the information needed to create a multidimensional portrait of the student as a learner (Skylight, 2000). Indeed, methods need to be combined to complement each other.

For the last seven years, we have been working with teachers at all grade levels to develop alternative forms of authentic student assessment strategies. The research evidence accumulating in our studies, and the data produced by other researchers, make us optimistic about the impact of one form of authentic assessment—self-evaluation—on the learning of students and their teachers.

Self-evaluation is defined as students judging the quality of their work, based on evidence and explicit criteria, for the purpose of doing better work in the future. When we teach students how to assess their own progress, and when they do so against known and challenging quality standards, we find that there is a lot to gain. Self-evaluation is a potentially powerful technique because of its impact on student performance through enhanced self-efficacy and increased intrinsic motivation. Evidence about the positive effect of self-evaluation on student performance is particularly convincing for difficult tasks, especially in academically oriented schools, and among high-need pupils. Perhaps just as important, students like to evaluate their work.

A Four-Stage Model for Teaching Student Self-Evaluation

In one stage of our research we interviewed exemplary users of co-operative learning methods (Ross, et al., 1998). When individual insights were assembled in a composite picture, a generic four-stage procedure emerged for teaching students their role in self-evaluation.

Stage 1—Involve students in *defining the criteria* that will be used to judge their performance. Involving students in determining the evaluation criteria initiates a negotiation. Neither imposing school goals nor acquiescing to student preferences is likely to be as successful as creating a shared set that students perceive to be meaningful. Workplace studies, for example, indicate that involving employees in making decisions about their work increases satisfaction and goal commitment. In addition to increasing student commitment to instructional goals, negotiating intentions enables teachers to help students set goals that are specific, immediate, and moderately difficult—characteristics that contribute to greater effort. The specific steps to guide this stage are as follows:

- students brainstorm criteria
- teacher and students negotiate criteria

Self-evaluation is a potentially powerful technique because of its impact on student performance through enhanced self-efficacy and increased intrinsic motivation.

- use student language to co-develop standards (e.g., a rubric)

Stage 2—Teach students how to *apply the criteria* to their own work. If students have been involved in a negotiation in Stage 1, the criteria that result will be an integrated set of personal and school goals. Since the goals are not entirely their own, students need to see examples of what they mean in practice. These models or examples help students understand specifically what the criteria mean to them. Teacher modeling is very important, as is providing numerous examples of what particular categories mean, using language that connects criteria to evidence in the appraisal. The specific steps to guide this stage are as follows:

- show examples
- students practice classifying the examples using the criteria and standards generated

Stage 3—Give students *feedback* on their self-evaluations. Students' initial comprehension of the criteria and how to apply them are likely to be imperfect. Teachers need to help students recalibrate their understanding by arranging for students to receive feedback (from the teacher, peers, and themselves) on their attempts to implement the criteria. Having different sources (e.g., peers and teacher) provide data for comparison helps students develop accurate self-evaluations. Discussion regarding differences in data can prove most helpful. The specific steps to guide this stage are as follows:

- provide comparative data
- talk about similarities and differences

Stage 4—Help students develop productive *goals and action plans.* The most difficult part of teaching students how to evaluate their work consists of designing ways to provide support for students as they use self-evaluative data to set new goals and levels of effort. Without teacher help, students may be uncertain whether they have attained their goals. Teachers can also help students connect particular levels of achievement to the learning strategies they adopted and the effort they expended. Finally, teachers can help students develop viable action plans in which feasible goals are operationalized as a set of specific action intentions. The specific steps to guide this stage are as follows:

- students identify strengths/weaknesses based on comparative data
- students generate goals
- teacher guides students to develop specific actions toward their goals
- students' goals and action plans are recorded

Frequently Asked Questions About Self-Evaluation

Do students who are taught how to evaluate their work learn better or more poorly than other students?

Three kinds of student benefits have been observed in the studies we and other researchers have conducted. The first is cognitive achievement, especially narrative writing skills (Ross et al., 2000). Students become better writers by learning how to evaluate their prose. The effects are strongest for the weakest writers. Self-evaluation training helps the low group the most because they are less certain about what constitutes good writing. All students, however, seem to benefit from the focusing effect of joint criteria development and use. The second benefit is in the area of motivation. Students who are taught self-evaluation skills are more likely to persist on difficult tasks, be more confident about their ability, and take greater responsibility for their work. Third, students' attitudes toward evaluation become more positive when they participate in the process. As students grow older they become increasingly cynical about traditional testing. When self-evaluation is included as a contributor to their final grade, students are more likely to report that evaluation is fair and worthwhile. Clearly, there is heightened meaningfulness of self-evaluation over other assessment data.

Do students self-evaluate fairly?

Many teachers, parents, and students believe that if students have a chance to mark their own work they will take advantage, giving themselves higher scores regardless of the quality of their performance. We have found that students, especially older ones, may do this if left to their own devices. But, when students are *taught* systematic self-evaluation procedures, the accuracy of their judgment improves. Contrary to the beliefs of many students, parents, and teachers, students' propensity to inflate grades decreases when teachers share assessment responsibility and control

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(Ross, et al., 2000). When students participate in the identification of the criteria that will be used to judge classroom production and use these criteria to judge their work, they get a better understanding of what is expected. The result is the gap between their judgments and the teachers' judgment is reduced. And, by focusing on evidence, discrepancies between teacher and self-evaluation can be negotiated in a productive way.

What kinds of self-evaluation techniques have the greatest chance of increasing student achievement and accuracy of self-appraisal?

Thoughtfully designed self-evaluation procedures that provide students with explicit criteria at an appropriate level of generality, that provide for student involvement in assessment decision-making, that elicit student cognitions about their performance, that ground student goal setting in accurate data, and that are integrated with sensitive instruction may provide teachers with a powerful lever for enhancing student learning.

What research or theory-based argument best connects student self-evaluation to achievement gains?

We base our expectations that a self-evaluation assessment system enhances student achievement on four arguments. Students will learn more because (1) self-evaluation will focus student attention on the objectives measured, (2) the assessment provides teachers with information they would otherwise lack, (3) students will pay more attention to the assessment, and (4) student motivation will be enhanced.

These four arguments are substantiated by our own research, and that of others. For example, it has long been demonstrated that being clear about goals makes a positive contribution to performance. Self-evaluation helps focus students' attention on the objectives being measured.

As well, self-evaluation is unique in asking students to reflect on their performance. Conventional test procedures provide no information about students' inner states during task performance, their subsequent interpretations about the quality of their work, and the goals they set in response to feedback. Self-evaluations that elicit information about students' effort, persistence, goal orientations, attributions for success and failure, and beliefs about their competence, give teachers a fuller understanding of why students perform as they do. When incorporated into teachers' deliberative planning they can anticipate impediments to learning, especially motivational obstacles.

As students move through the school system their skepticism about the validity of test scores increases. Students view self-evaluation more positively than other kinds of assessment. We found that students like self-evaluation because it increased clarity about expectations, was fairer, and gave students feedback that they could use to improve the quality of their work (Ross et al., 1998b).

Finally, self-evaluation has an indirect effect on achievement through self-efficacy (i.e., beliefs about one's ability to perform actions that lead to desired ends). What is crucial is how a student evaluated a performance. Positive self-evaluations encourage students to set higher goals and commit more personal resources to learning tasks. Negative self-evaluations lead students to embrace goal orientations that conflict with learning, select personal goals that are unrealistic, adopt learning strategies which are ineffective, exert low effort and make excuses for performance. Higher self-efficacy translates into higher achievement.

These four arguments suggest that self-evaluation is a potentially powerful stimulant of achievement.

Is simply requiring self-evaluation enough, or do students have to be taught how to evaluate their work accurately?

Students harbour misconceptions about the self-evaluation process (e.g., the role that evidence plays). As a result, self-evaluation is unlikely to have a positive impact on achievement if these misconceptions are not addressed by teaching students how to evaluate their work. Simply requiring self-evaluation is unlikely to have an effect on achievement. Students have to be taught how to evaluate their work accurately and need time to develop the appropriate skills.

Self-evaluations that elicit information about students' effort, persistence, goal orientations, attributions for success and failure, and beliefs about their competence, give teachers a fuller understanding of why students perform as they do.

Are there any benefits for teachers by training students in self-evaluation?

Teaching self-evaluation also has benefits for teachers. Teachers who participate in in-service focused on how to teach self-evaluation grow more confident in their skills as teachers and use a greater variety of assessment techniques in the classroom.

In one of our studies where teachers were involved in action research on student self-evaluation as a mechanism for professional growth, we found that teacher self-efficacy was enhanced (Ross et al., 1999). Teacher-efficacy is the belief that teachers, individually and collectively, will be able to bring about student learning. There is a generative power of teacher expectations. Teachers who anticipate that they will be successful set higher goals for themselves and their students, are more willing to engage in instructional experiments, persist through obstacles to implementation, and have higher student achievement. The connection between teacher learning and student learning is a critical and essential link.

What are the greatest challenges for teachers incorporating self-evaluation into their assessment repertoires?

One of the greatest challenges for teachers is the recalibration of power that occurs when assessment decisions are shared. Data collected in one of our projects (Ross at al., 1998a) suggested that teachers found it difficult to share control of evaluation decision-making, a responsibility at the core of the teacher's authority. Such difficulty may be due to the fact that teaching students to be self-evaluators involves the implementation of fundamental changes in the relationship between teachers and students in the classroom. Changing root beliefs, behaviours and relationships is difficult and takes time. Accordingly, another challenge is time. Teachers need considerable time to work out how to accommodate an innovation that involves sharing control of a core teacher function with their existing beliefs about teacher and learner roles. As well, students need time to understand what self-evaluation is and how it relates to their learning, in addition to learning how to do it.

Challenges such as these will demand that teachers be patient with the change process, for themselves and for their students.

References

Rolheiser, C (Ed.). (1996). *Self-evaluation...Helping students get better at it!* Ajax, ON: Visutronx.

Ross, J. A., Rolheiser, C., & Hogaboam-Gray. (1998a). Student evaluation in cooperative learning: Teacher cognitions. *Teachers and Teaching: theory and practice, 4*(2), 299–316.

Ross, J. A., Rolheiser, C., & Hogaboam-Gray. (1998b). Skills training versus action research inservice: Impact on student attitudes on self-evaluation. *Teaching and Teacher Education, 14*(5), 463–477.

Ross, J. A., Rolheiser, C., & Hogaboam-Gray. (1999). Effects of collaborative action research on the knowledge of five Canadian teacher-researchers. *The Elementary School Journal, 99*(3), 255–274.

Ross, J. A., Rolheiser, C., & Hogaboam-Gray. (2000). Effects of self-evaluation training on narrative writing. *Assessing Writing, 6*(1), 107–132.

Skylight Publishing (2000). *Balanced assessment to increase student achievement.* Arlington Heights, IL: Skylight Professional Development.

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TIPS for Getting Started with Student Self-Evaluation

- Define self-evaluation for students (e.g., "judging the quality of your work")
- Make the benefits of self-evaluation visible to students. Talk about the benefits, and address such benefits consciously, both at the beginning of the process and throughout.
- Overtly confront students' feelings and beliefs about self-evaluation. This means directly dealing with misconceptions.
- Start small. Create lots of small, short self-evaluation opportunities for your students. These experiences may involve daily experiences with various aspects of the Four-Stage Model.
- Use a variety of quick pre-designed forms to get your students into the practice of self-evaluating during or after regular activities they do in the classroom (see Rolheiser, 1996, for many sample forms).
- Choose a performance that you and your students have had some experience with (e.g., oral presentations, research reports, narrative writing). Try out the entire Four-Stage Model for this performance or outcome.
- Expect a range of reactions from your students as you help them get better at self-evaluation. You will have a continuum of responses, from positive reactions as students see this as 'fair' assessment, to negative reactions as students discover that sharing control also means sharing the workload.
- Create collaborative conditions for your own professional learning. Work with a peer or colleague in experimenting with self-evaluation. Such experimentation will enhance personal assessment literacy. The constructive dissonance, social comparison, synthesis, and experimentation that occur when working with others will have a significant effect on your learning, and ultimately, on your students' learning. Collaboration will help you more effectively link student learning and instructional approaches for the purpose of continuous improvement.
- Let all stakeholders (students, parents, administrators, colleagues) know what assortment of assessment practices you are using in your classroom, and practice articulating a rationale for why self-evaluation is an important part of your assessment repertoire.
- Trust that your students can be integral assessment partners, and with time, teaching, and co-learning, that you and your students will become better at it!

Donna C. Creighton

What Do Rubrics Have to do with Teaching?

I remember working extremely hard on a project about farming when I was in Grade 3. I did research, learned special terminology, painstakingly created a 3-D construction paper model of a farm, and presented my work to the class. I also remember feeling very proud of this work until I received my mark from the teacher. My personal feeling of achievement was snuffed out by no more than two sentences and a letter grade. I never understood why the teacher didn't see my work the way I did, and I was too embarrassed to ask.

Most people I know can relate a similar story from their school experience. Perhaps this is why many elementary educators have embraced the philosophy of authentic assessment. This approach to classroom assessment is based on the belief that the answer to the question, "How am I doing?" comes from *both* the student and the teacher, thereby removing the mystery of how a grade is later determined. Hart (1994, pp. 10–11) says that in their general design, authentic assessments:

- go to the heart of essential learnings, to the understandings and abilities that matter to us
- are educational and engaging
- are part of the curriculum rather than arbitrary intrusions with no purpose other than to "shake out a grade"
- reflect real-life, interdisciplinary challenges
- present students with complex, open-ended problems and tasks that integrate knowledge and skills
- often culminate in student products or performances
- are standard setting, pointing students toward higher, richer levels of knowing

Rubrics, rating scales, and achievement charts have become a readily recognizable and popular component of authentic assessment and are now firmly entrenched in our assessment and evaluation lexicon. Professional books and articles, locally and provincially developed exemplars, as well as commercial teaching products provide us with a variety of samples to try out in the classroom. However, in our haste to move forward, we have often left out the most important piece: how rubrics by their very nature necessitate particular teaching practices. Without attention to how they fit with teaching practices, rubrics have the potential for becoming just another mysterious form of student assessment and evaluation.

Refocusing on the Intent of Rubrics

Goodrich (1996) defines a rubric as "a scoring tool that lists the criteria for a piece of work, or 'what counts'... [I]t also articulates gradations of quality for each criterion, from excellent to poor" (p. 14). Rubrics are intended as communication devices that clearly and precisely convey to students what their target is and what they need to do to hit that target. However, this belief is only of value if accompanied by the practice of presenting the rubric to or constructing it with students prior to the related lessons and tasks, rather than at the end (Harris et al., 1996).

As Wiggins and McTighe (1998) point out, this practice of backward design does not come naturally to many teachers who are more accustomed to (and perhaps comfortable with) thinking like activity designers rather than like assessors (p. 65). Through this co-construction process, students and teachers look at samples of work that provide examples of what the work looks like at different levels and generate the descriptive language together. Presenting a "stand alone" rubric cannot achieve this: students literally need to see the different levels in samples, analyze and discuss how the levels differ, and suggest revisions for improvement based on criteria in the rubric (Goodrich, 1996). The classrooms of teachers who think like assessors, then, provide enlarged copies of the rubric in use, explanations in student language of the content standards or curriculum expectations being addressed, and/or samples of work that demonstrate performance at the different levels (using anonymous samples of work from previous classes or teacher created samples).

Ensuring the task is worthy of a rubric: It's all in the verbs!—One common trap into which we can easily fall is the tendency to "over-rubricate": either producing/using more rubrics than we could possibly need, or producing/using overly-detailed rubrics. But when is it appropriate to use a rubric for student assessment instead of, say, a checklist? Popham (1997, p. 72) states that rubrics are typically used to assess *significant* constructed responses, such as compositions, presentations or projects, are rarely used to judge students' responses on short-answer tests, and are unnecessary for scoring multiple choice tests. Therefore, it is the nature of the task and the information the teacher wishes to gather on the students that will determine whether a rubric is the appropriate assessment tool.

Performance or "rich" tasks lend themselves to rubric-based assessment, but caution must be taken in developing such tasks so that they become neither too big nor too general. Performance tasks are open-ended and allow students to demonstrate their *understanding* of previously addressed content by applying it in an authentic or "real life" way. If the goal is teaching for understanding, it is critical to move beyond instruction for basic knowledge and comprehension and present opportunities for higher level thinking based on that basic knowledge. Wiggins and McTighe (1998) write, "To understand a topic or subject is to use knowledge and skill in sophisticated, flexible ways. Knowledge and skill, then, are necessary elements of understanding, but they are not synonymous with understanding… Students need to make conscious sense and apt use of the knowledge they are learning and the principles underlying it" (p. 24).

Bloom's (1956) taxonomy of cognitive skills provides an excellent way for teachers to link process verbs to products and therefore raise awareness of how frequently the higher levels of thinking are addressed (see Table 1). For example, elementary students are often asked to *Illustrate the story* or *Make a science model,* which require thinking at the comprehension and application levels. These are types of performances or demonstrations, but not ones that are "rich" because they address lower levels of the taxonomy. However, by changing these tasks to *Create an advertisement for the story,* or *Design an invention based on the concept of…*the teacher now requires students to think at the synthesis level and will consequently have much more information on his or her students. Does every skill and concept need to be taken to this level? First, it would be impossible to do this within the time constraints of a school year, because tasks of this nature take more time for students to complete. Second, if the design of the performance or demonstration is truly rich, it will integrate concepts and skills from a number of subject areas, providing the teacher with a lot of assessment data. What is critical is that the performance task is built upon concepts and skills previously addressed in the classroom, and that it allows students to show how well they have learned those skills and concepts by applying them in a new and engaging way. As Harris et al. (1996) put it, "Products and performances that embody excellence across multiple standards indicate an efficient teaching and learning process and a meaningful curriculum" (p. 27).

Avoiding use of rubrics solely as a "destination"—Without careful instruction, rubrics can become the students' destination rather than a road map for helping them reach that destination. Rubrics are tools designed to provide constructive feedback for students through self-, peer, or teacher assessment *in order to further develop skills or knowledge.* When a rubric is presented at the beginning of a unit of study or task and referred to throughout the process by the teacher and students, it becomes an active resource to guide students through their work. It also guides teachers to the instructional needs of the students, rather than functioning as a static form of measurement or judgment. Sound and equitable teaching practice means allowing students more than one "shot" at the target—an opportunity for an initial performance/demonstration which they self-assess or assess with the teacher to identify areas for improvement, then an opportunity for a second, revised performance. This is the one that "counts."

Using rubrics holistically and analytically—A common point of confusion and discussion centres around when it is appropriate to use a rubric holistically or analytically when looking at student work. Marzano (1996) distinguishes the two in this way:

"Holistic scoring combines performance standards for multiple traits into a single rubric. Analytic scoring assesses traits separately…With holistic scoring, a single rubric is used and its levels are composites of the various rubric levels for the individual traits embedded in the task" (p. 7).

Marzano notes that holistic scoring assesses a student's most consistent level of performance, which can be problematic in cases where performance from trait to trait (or category) differs greatly, such as in this example:

Trait/category a: level 3
Trait/category b: level 3
Trait/category c: level 3
Trait/category d: level 1

Marzano writes, "Using the holistic rubric in a strictly logical fashion, [this] student would receive a score of 1 even though he had exhibited level 3 performance on three out of four traits. The logic of a holistic rubric demands that all traits at a given performance level are executed at least at that level" (p. 8). Analytic scoring (i.e., item by item, or skill by skill) avoids such difficult situations, but may run the risk of swinging too far in the opposite direction, where the skills being assessed become too narrow, too discrete, or too limiting to lend themselves to multi-level performance. Harris et al. (1996) assert that there are times when it is appropriate to use one scoring approach over the other. For example, analytic scoring can provide useful diagnostic information of a specific component of student performance, allowing both students and teachers to identify strengths and weaknesses and to set goals for improvement (Popham, 1999). Holistic scoring encourages students to think of their work more broadly as they strive to hit the target or standard described to them in the rubric. Popham (1999) suggests a "middle-of-the-road" approach in which teachers initially grade all students' work holistically, "then return for an analytic scoring of only those responses that were judged, overall, to be unsatisfactory" (p. 148). The teacher then works with the student to set goals for improvement based on the analytic feedback.

Putting It All Into Context

Rubrics enable us to define what we are looking for in students' work. However, the expectations may become too narrow if teachers become too dependent on this one assessment tool. The message that bears repeating over and over again is that *rubrics are one of many classroom assessment tools,* and the skilled teacher is one who draws upon many forms of data collection to develop a whole picture of each student.

References

Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives: The classification of educational goals.* New York: Longman.

Goodrich, H. (1996). Understanding rubrics. *Educational Leadership, 54* (4), 14–17.

Harris, D., Carr, J., Flynn, T., Petit, M., & Rigney, S. (1996). *How to use standards in the classroom.* Alexandria, VA: Association for Supervision and Curriculum Development.

Hart, D. (1994). *Authentic assessment: A handbook for educators.* Menlo Park, CA: Addison-Wesley Publishing Company.

Marzano, R. (1996). Understanding the complexities of setting performance standards. In Blum, R. and Arter, J. (Eds.), *A handbook for student performance assessment in an era of restructuring.* Alexandria, VA: Association for Supervision and Curriculum Development.

Popham, W. J. (1999). *Classroom assessment: What teachers need to know* (2nd edition). Needham Heights, MA: Allyn and Bacon.

Popham, W. J. (1997). What's wrong—and what's right—with rubrics. *Educational Leadership, 55*(2), 72–75.

Wiggins, G. & McTighe, J. (1998). *Understanding by design.* Alexandria, VA: Association for Supervision and Curriculum Development.

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TABLE 1: BLOOM'S TAXONOMY OF COGNITIVE SKILLS

LEVEL	DEFINITION	WHAT STUDENT DOES	PROCESS VERBS	PRODUCTS
EVALUATION	Judging the value of ideas, materials or products	Gives value. Makes choices. Arranges ideas Judges ideas. Presents choices.	appraise assess award choose conclude consider criticize critique debate decide defend determine dispute editorialize evaluate grade judge justify measure prove rank recommend reflect select test	court trial debate discussion editorial essay letter panel recommendation research paper self-evaluation survey
SYNTHESIS	Putting together constituent parts or elements to form a new whole	Uses old ideas to make new ideas. Changes old ideas. Creates new ideas.	adapt advertise blend change combine compose create design develop devise estimate form formulate imagine infer invent modify originate predict prepare prescribe produce refine reflect role play suppose transform	abstract advertisement comic strip conversation dance game invention magazine mural news article pantomime play poem puppet show recipe song story structure TV/radio show toy treasure hunt
ANALYSIS	Breaking down an idea into its constituent parts	Looks at parts. Sees relationships. Organizes parts.	analyze categorize classify correlate diagram discover dissect divide examine explain group inspect interpret memorize order (seriate) relate research search separate simplify sort survey uncover	cartoons chart commercial contract diagram fact file crossword puzzle family graph questionnaire report secret code survey tree diagram
APPLICATION	Using information in new situations or to solve a new problem. Uses knowledge.	Applies previously learned information to another situation	apply chart code collect construct demonstrate dramatize examine experiment graph group illustrate interview manipulate model organize paint practise record relate report simulate sketch solve track use	collage collection construction diagram diary diorama display illustration map mobile model photographs picture poster puzzle scrapbook sculpture skit stitchery
COMPREHENSION (lowest level of understanding)	Understanding the information being communicated without relating it to other material or ideas	Organizes previously learned material so that student can rephase it, describe it in own words explain it or predict implications or effects on the basis of the known facts.	associate change compare contrast define differentiate discuss distinguish expand extend locate match outline paraphrase reorganize restate retell reword translate	choral reading demonstrate illustrate story interpret cross-classification chart picture story retell story teach lesson translate
KNOWLEDGE (memory)	Learning the information	Recalls or recognizes bits of information.	ask count define describe draw fill in find identify indicate label listen match memorize name observe pick point quote read recall recognize record retell select show tabulate trace underline write	"fact" chart map read a book memorize information recite a poem timeline worksheet

Ken O'Connor

Grading—An Exercise in Professional Judgment

"Grading practices are not the result of careful thought or sound evidence . . . rather, they are used because teachers experienced these practices as students and, having little training or experience with other options, continue their use."(Guskey, 1999, p. 20)

In the past in Ontario there has been considerable truth in this. The policy requirements of the new secondary curriculum are shining a light on grading practices and many teachers are re-examining what they do. This article identifies the key aspects of the new curriculum with regard to grading and the grading principles, which I believe, should guide grading practices. I offer a practical example which puts together policy and principle and shows several approaches to determining student grades. The bottom line is that grading should be seen, not merely as a numerical, mechanical exercise, but as an exercise in professional judgment.

Policy

The policy requirements of the new curriculum are found in two documents—*Program Planning and Assessment* and *Guide to the Provincial Report Card, Grades 9–12* (Ontario Ministry of Education, 1999). The requirements are summarized at right. The most significant departures from past practice are the requirements that the focus be on the most consistent level of achievement with special consideration for more recent achievement and that there be clear separation of achievement and learning skills.

Program Planning and Assessment (Ontario Ministry of Education)
In Ontario secondary schools, the value assigned (to represent the quality of student work) will be in the form of a percentage grade.
Assessment and evaluation will be based on the provincial curriculum expectations and the achievement levels outlined in this document and in the curriculum policy document for each discipline (p.9).

80-100%	Level 4	A very high to outstanding level of achievement.
70-79%	Level 3	A high level of achievement.
60-69%	Level 2	A moderate level of achievement.
50-59%	Level 1	A passable level of achievement.
<50%		Insufficient achievement of curriculum expectations. (p.11)

70% of the grade for each course will be based on assessment and evaluation conducted throughout the course.
30% of the grade will be based on final evaluation (using a) method suitable to the course content, and administered toward the end of the course.
Evaluation should reflect each student's most consistent level of performance.

Guide to the Provincial Report Card, Grades 9-12 (Ontario Ministry of Education)
Students should be given numerous and varied opportunities to demonstrate the full extent of their achievement of curriculum expectations (p. 8).

70% of the grade will be based on evaluations . . . (conducted) throughout the course. This portion of the grade should represent the student's most consistent level of achievement, with special consideration given to the more recent evidence of achievement.
30% of the grade will be based on . . . final evaluation (using a) method(s) of evaluation suitable to course content and expectations . . . and administered towards the end of the course (p. 9).
The assessment and evaluation of learning skills is distinct from and should not influence the determination of percentage grades (p. 10).

Principles

The following guidelines are designed to support learning, and to encourage student success (O'Connor, 1995):

1. Limit the valued attributes included in grades to individual achievement.
2. Sample student performance—don't mark everything.
3. "Grade in pencil"—keep records so they can be updated easily.
4. Relate grading procedures to the intended learning (outcomes).
5. Use care "crunching" numbers.
6. Use criterion-referenced standards to distribute grades.
7. Properly record evidence from quality assessment instruments.
8. Discuss assessment and evaluation practices, including grading with students at the beginning of instruction.

Linking Policy and Principles

Guideline #1 is completely aligned with the policy requirement to separate achievement from learning skills. Guideline #2 links with the requirement that 30% of each student's grade should come from final evaluations (the plural must be emphasized) and the inference that the 70% should also be from summative evaluations during each course. Guideline #3 is supported by the requirement that special consideration be given to more recent achievement. Guideline #4 is operationalized by the policy requirement that evaluation be based on the achievement charts. In practical terms this means that the achievement chart categories should be used as the basis for weighting grades. Thus the achievement chart categories become the "set" for weighting, and the assessment methods become the sub-set. Guideline #5 comes into play through the requirement to focus on the most consistent level of achievement, so it is clear that the determination of grades should not just be a number crunching exercise. Guideline # 6 is supported through the link to the achievement chart categories which makes it clear that a criterion-referenced approach is necessary. Guideline #7 is acknowledged in the requirement for students to have many and varied opportunities to demonstrate their achievement. Guideline #8 is not specifically included but it is certainly inferred in the principles in the *Program Planning and Assessment* document.

Practice

It is not always easy to imagine what abstract principles might look like in practice. The following example is designed to make some of the principles concrete. Table 1, which depicts a page from a grade book for two students with essentially the same achievement, illustrates how the policy and principles can be implemented. It is important to note that for the whole reporting period there are only nine evaluations included (Guideline #2), and that the organizing structure for the page is the achievement chart categories. For each of the nine evaluations, scores were recorded in the categories from which expectations were evaluated for example, the first evaluation (A) included only evaluations from knowledge/ understanding and thinking/ inquiry, while the last evaluation (I) included expectations from all four categories.

TABLE 1: Determining Percentage Grades for Mid-semester/Term 1

Evaluations included in grade determination

UNIT 1	UNIT 2	UNIT 3
A Perf. Task i	**D** Test	**G** Perf. Task i
B Perf. Task ii	**E** Perf. Task i	**H** Test
C Test	**F** Perf. Task	**I** Perf. Task ii

		K/U	T/I	C	A/MC	
Weighting		25%	25%	25%	25%	
Student Z	A	69	75			
	B	59	65	79		
	C	65	79	79		
	D	75	90	95		
	E	69		75	79	
	F	79	100		75	
	G	85		95	79	
	H	75	90	100		
	I	95	95	95	79	**Report Card Grade**
Total		671	529	604	391	
2 and/or 4 Mean						
3 and/or 4 Median						
		K/U	**T/I**	**C**	**A/MC**	
Student Y	A	6/10	7/10			
	B	X		✓	✓	
	C	65%	79%	79%		
	D	3	4	4		
	E	✓		✓	✓	
	F	3	4		3	
	G	4		4	3	
	H	79%	90%	100%		**Report Card Grade**
	I	3	4	4	3	
Summary						

Having recorded the data in this way, there are several approaches that can be taken to determine report card grades—see Table 2. This continuum of approaches starts with traditional grading where there is no basis for grades other than a letter/percentage relationship, where the weighting is based on assessment methods, and where the only calculation considered is the mean. Approaches #2 through #5 utilize the achievement charts and the brief descriptions of each level on page 11 in *Program Planning and Assessment* as the basis for grades, and weighting is linked to the achievement chart categories.

Approach #2 uses the mean as the method of calculating central tendency. Approach #3 suggests an alternative numerical calculation—the median. (Note that the mode is another possibility.) Approach #4 acknowledges that evidence is now being collected in various formats (x/10, %, checklists, level scores), but these multiple measures are converted to percentages; this approach uses calculations as in approach #2 or #3. Approach #5 focuses on the policy requirements about consistent and recent performance and emphasizes professional judgement—based clearly on a body of evidence and the performance standards in the curriculum policy. In order to put this approach into operation it is necessary to acknowledge that we really cannot distinguish 100 points of achievement and that it is more realistic to use a 16-point scale with high, middle and low points in each level, including

TABLE 2: CONTINUUM OF APPROACHES TO DETERMINING GRADES

BASIS FOR GRADES	WEIGHTING BASE	GRADE DETERMINATION
1. Numerical grading scale *e.g., A = 80-100%*	Assessment methods *e.g., tests - 50%, projects - 50%*	Mean/Average
2. Description of levels *i.e., in words*	Achievement chart categories *e.g., standards, outcomes*	Mean/Average
3. Description of levels	Achievements chart categories	Median
4. Description of levels	Achievements chart categories	Multiple measures converted to %, then mean or median
5. Description of levels	Achievements chart categories	Multiple measures – no conversion/calculation – most consistent with consideration for more recent – professional judgment supported by body of evidence

below 50%. In level #4 there is also a fourth point as 100% must be attainable (see Table 3).

Table 3: Converting from One Grading System to Another – Grade 9, 1999/2000

REPORT CARD DESCRIPTION	ACHIEVEMENT LEVEL	LETTER GRADE	MARK OUT OF 10	% GRADE RANGE	% GRADE
A very high to outstanding level of achievement. Achievement is above the provincial standard.	4	A+ A A-	8-10	80-100%	95,100 87 82
A high level of achievement. Achievement is at the provincial standard.	3	B+ B B-	7	70-79%	78 74 71
A moderate level of achievement. Achievement is below, but approaching, the provincial standard.	2	C+ C C-	6	60-69%	68 64 61
A passable level of achievement. Achievement is below the provincial standard.	1	D+ D D-	5	50-59%	58 54 51
Insufficient achievement of curriculum expectations. A credit will not be granted.	Below Level 1		4	Below 50%	45 40 35

Conclusion

I hope that ultimately all teachers in Ontario secondary schools will use approach #5. For many it would be too big a step to take at this time, so it is hoped that this continuum will be seen as a series of steps through which teachers (individually and collectively) can move as they implement the new curriculum over the next four years. If they do this they will be bringing policy, principle, and practice together in ways which honour the professionalism of teachers and make grades fair and honest summaries of student achievement.

References

Guskey, T. (Ed.). (1996). *Communicating student learning.* Alexandria, VA: Association for Supervision and Curriculum Development.

O'Connor, K. (1999). *The mindful school: How to grade for learning.* City: Skylight.

Ontario Ministry of Education. (1999). *Program planning and assessment.* Toronto: Author.

Ontario Ministry of Education. (1999). *Guide to the report card, grades 9–12.* Toronto: Author.

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Cathy Costello and Barry McKillop

Dealing with Lates and Absences

The release of the new secondary school curriculum by the Ministry of Education and Training in the Spring of 1999 marked a significant shift in assessment philosophy and practice in Ontario, and caused some consternation and controversy among the teachers of the province. Policy statements and the design of the new report card seemed to indicate that teachers would no longer be able to deduct late penalties of as much as ten percent per day from the grades on their students' assignments. Many teachers felt they would lose a key tool for motivating students to submit work in a timely fashion, and that students would take advantage of a system that recognized their inability to meet deadlines with the initial "N" (standing for "needs improvement").

This article presents some background on the issue of late assignments, and some strategies for those teachers who are looking for support in approaching the issue of separating student achievement from learning skills. Proposed practices are based on the work of Richard Stiggins, Grant Wiggins, and Ken O'Connor, current researchers and writers on student assessment. They are also drawn from conversations with teachers in the Toronto, York Region, Simcoe, Peel, and Hamilton school boards, and from teacher behaviours documented in the studies of Dr. Alan King and Marjorie Peart in the Good Schools literature developed under the sponsorship of the Ontario Secondary School Teachers' Federation.

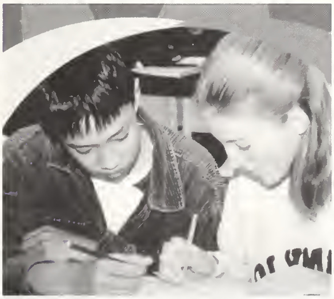
The Ontario Curriculum, Policy Statements

The new secondary school documents, grounded in the philosophy and principles of results-based education, set forth assessment and evaluation issues for educators which mark a departure from practices which have been usual for decades. Ontario Secondary Schools Grades 9 to 12 states in section 6.2.1:

"Assessment is the process of gathering information from a variety of sources (including assignments, demonstrations, projects, performances, and tests) that accurately reflects how well students are achieving the curriculum expectations. As part of assessment, teachers provide students with descriptive feedback that guides their efforts towards improvement. Evaluation is the process of judging the quality of a student's work on the basis of established achievement criteria, and assigning a value to represent that quality."

The same message is echoed in *The Ontario Curriculum, Grades 9 and 10: Program Planning and Assessment*:

"Assessment and evaluation will be based on the provincial curriculum expectations and the achievement levels outlined in this document and in the curriculum policy document for each discipline" (p. 9)



The policy statements seem to suggest that the place where that habit of lateness will be reported is under "Learning Skills."

The *Guide to the Provincial Report Card, Grades 9-12* is even more explicit in separating achievement of the curriculum expectations from learning skills, stating:

"Evaluation of learning skills must not be included in the determination of percentage grades, which reflect only the student's achievement of the curriculum expectations" (p. 5).

The *Guide* also defines some of the specific learning skills issues; for example, "regularly completes assignments on time and with care," and "demonstrates persistence in bringing tasks to completion," under the heading "Works Independently." The Minister of Education, the Honourable Janet Ecker, stated in the fall of 1999 that students who are late with their work or show poor work habits can expect to see that reflected in their report card.

The purpose of this new direction is twofold:

1. to ensure that student achievement of the expectations — or clear learning targets, as Stiggins and others call them — is accurately represented, unclouded by issues of student behaviour or classroom management styles; and
2. to provide students and parents with very accurate information about students' strengths and weaknesses so that they can set goals for improved student learning.

These purposes are, once again, revealed with some clarity in the *Guide to the Provincial Report Card*:

"The Provincial Report Card focuses on two distinct, but related, aspects of student achievement: (1) the achievement of curriculum expectations, and (2) the development of learning skills. Accordingly, the report card has separate sections for reporting on the student's

Adolescents are still learning appropriate time management strategies. They are typically more emotional than rational.

demonstration of skills required for effective learning. By separating these two aspects of achievement, the report card allows teachers to provide more specific information to parents and students and to identify more clearly the student's strengths and areas in which improvement is needed" (p. 4).

Late Assignments and Late Penalties

Learning skills are the essential foundation for lifelong learning, and the new curriculum does not even implicitly suggest abandoning them as a focus. In reconciling their concerns about the issue of late assignments, teachers need to consider how well the penalties they have applied in the past have worked to influence students towards a productive outcome. It is likely safe to say that most students do not wish to submit assignments after the due date, but late assignments may be the result of several situations.

Adolescents are still learning appropriate time management strategies. They are typically more emotional than rational and may prioritize the demands of their lives based on the impulse or feeling of the moment rather than on the reality of organizing their school obligations. Thus, a late assignment may be due to faulty judgement about managing time. Another aspect of flawed time management may be the inability to gauge the amount of work required to complete the assignment successfully, and students may leave too much of the work until it is too late to complete it satisfactorily for the deadline. Some students may not submit assignments because they feel that there is little hope of a good result. Here, they may be indicating that more clarity and information around the specifics of the assignment are necessary, or that there are component skills of that assignment which they have not developed sufficiently to execute for a good result.

Ultimately, teachers who are using late penalties must ask themselves the questions: Have late penalties produced the desired result of improved, on-time achievement of assigned tasks? Have they influenced the behaviour of individual students favourably? Do late penalties make adequate allowance for individual learning needs and respect the fact that students may be at very different places on a continuum of learning skills? And finally, in terms of student achievement, is time the constant and quality achievement the variable, or is quality achievement the constant, and time the variable—within reason?

Current Assessment Philosophy

The issue of lateness is not addressed directly in much of the current assessment literature; however, authors such as Stiggins, Wiggins, and others suggest an assessment philosophy which points to a clear direction on this issue. In his "Assessment Bill of Rights," Grant Wiggins maintains that students are entitled to, among other things, "clear, apt, and consistently applied teacher criteria in grading work, published models of excellent student work that demonstrates the standards," and "ample opportunity to produce work that [they] can be proud of —this includes the opportunity for students to self-assess and correct their work" (p. 28). Wiggins suggests that teachers consider the student to be an apprentice who should have access to models and feedback in learning and assessment so that they can have repeated opportunities to master the standards (p. 49).

Richard Stiggins also raises the issue of "second chance assessment" similar to the point Wiggins makes about seeing the student as an apprentice. Stiggins advises teachers to be sure students are in a position to use assessment results effectively and efficiently to promote their own academic well-being (p. 384). He even suggests phrases for teacher dialogue with students who wish or need to improve their performance: "Do you want to practise now and redo the assessment? If you do, I will reevaluate your performance—no penalties. But that re-evaluation will need to fit into my schedule" (p. 426).

Ken O'Connor does deal directly with the issue of late work, finding two problems with approaches that deduct 10% per day to a maximum of 50%, or similar. He points out that the penalty here distorts student achievement and thus contributes to a mark, and ultimately a grade that does not have clear meaning. He also comments on such penalties as a disincentive for students to complete work, suggesting instead that students always be encouraged to submit work on time, and that penalties be kept as small as possible—1% or 2% per day to a maximum of 10%—so as not to overly distort real student achievement. O'Connor advises recording the fact of the tardiness to keep track of a reporting (not a grading) variable (pp. 49–50).

Teacher Practices to Promote Achievement—There are a number of preventative measures that many teachers take to ensure that students have every opportunity to produce quality work on time. There are also strategies which teachers use to provide windows of opportunity for students to submit assignments. And, if students are to understand the nature of their responsibility, they need to have opportunities to discuss the issue of meeting deadlines in the classroom.

Many teachers assume that students wish to be successful in school, and then they set up the conditions for success. They present tasks that are a significant and interesting challenge to students. They scaffold the work, providing pertinent instruction, modeling, and exemplars so that students can get a clear picture of what is required, and a sense of how to get there. Stiggins points out that students will take responsibility for their own success if they can perceive the route to success; they "can reach any target they can see and that stands still for them" (as quoted in Earl and Cousins). To help students better shape their quality product, teachers "stage" the work, setting mini-deadlines when students must produce portions of work in class prior to the ultimate due date. These opportunities allow teachers to check on student progress, ask key questions about student processes, and provide valuable feedback or re-teaching to ensure that concepts and organization are well understood. With these checking points, teachers can be well aware of students who are having difficulties and

who may require extra assistance to produce a timely piece of work.

Teachers from many Toronto-area boards have also shared their strategies for collecting student work while avoiding the use of late penalties. There are teachers who create a long-range plan with all test and assignment dates set and presented to students at the beginning of the term or semester. The advantage here is that students have a sense of what is coming, will likely have well-timed reminders of the crucial dates, and be given class time to discuss and prepare for the upcoming tasks. Some teachers prefer to negotiate an assignment due date with students, providing a one or two day leeway to take into account other school events—tests or assignments in other subject areas, large extra-curricular commitments such as a school musical—which may interfere with the original chosen date. Other teachers provide a five to seven day window during which some assignments are collected each day from a number of students. Still others will accept assignments up to the day before they plan to return the entire set of papers. And there are those teachers who operate on the principle of continuous intake of assignments with students tracking their own submissions on a chart mounted on a classroom bulletin board, providing that all assignments are submitted no later than two or three weeks prior to the end of the term or semester.

Whatever the method, teachers should feel that they have control of the process while still providing a measure of flexibility for students to develop a sense of responsibility and success. Teachers who feel overwhelmed with marking should consider providing fewer summative tasks, making significant efforts to help students improve their achievement, rather than many opportunities for students to repeat the same mistakes. King and Peart comment in *The Numbers Game,* "Teachers would certainly prefer students to be successful in their courses, and make special efforts to motivate and help them by re-testing, offering bonus marks and giving them individual help after class" (p. 180).

Establishing a Culture of Responsibility— Both Stiggins and Wiggins suggest the importance of taking the mystery or secrecy out of the assessment process. To this end, with regard to the issue of late work, it makes sense to engage students in some dialogue about the reasons for deadlines and the importance of submitting work on time. In this way, students will have knowledge which will help them to develop an "internal locus of control" so that they can manage their own "academic well-being" (phrases from Stiggins, p. 403). In order to approach the issue of responsibility with students, some of the following steps may be helpful:

1. Establish a school (preferably) or departmental policy which identifies key learning skills which students have a responsibility to demonstrate – for example,
   - punctual and regular attendance
   - responsibility for completing tasks, including all work missed when absent from class
   - completion of assignments on time and with care
   - working consistently, effectively, and cooperatively to meet the requirements of each course
2. Discuss with students the issue of deadlines, the reasons for them and the importance of meeting them. Invite students to share experiences they have had or know about which show the importance of deadlines and the consequences of not meeting them.
3. Explain clearly the importance to you and to the students for submitting assignments on time. You teach other classes and wish to put a quality effort into assessing the needs and achievement of all your students. You also wish to move on to other work, ensuring that students have the prerequisite knowledge before you proceed.
4. Assure students that you are aware of the fact that they have assignments and tests for other subjects, and that there can be some flexibility within a reasonable time frame around due dates if students make you aware of their other obligations.
5. Allow for the possibility that there may be some occasions when certain obstacles may interfere with a student's completion of work, and encourage individuals to approach you ahead of due dates if possible with their concerns or difficulties.

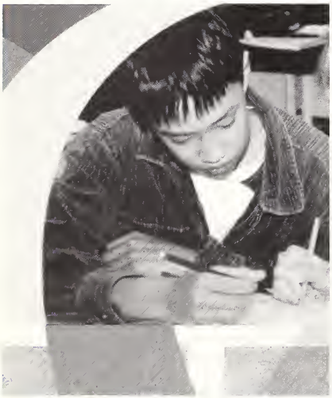
Are deadlines absolute in the "real" world?

Yes and no, but you have to know which—some examples:

- A closing on a house is negotiated, but then becomes a legal deadline. *Breaching the closing date could result in a lawsuit.*
- Court appearances and trial dates are negotiated; postponements may be requested, and, given the circumstances and consent of all parties, are granted. *Once the date has been set, parties risk a charge of contempt of court which may entail fines or even jail time if they don't appear. Or a person could be convicted in his/her absence.*
- Job application deadlines can be absolute—a specific day and time—or may be continuous intake—you submit your completed form and wait to be called. *If you miss a deadline, you will not be considered for the job.*
- Publishers set deadlines for authors to complete books or articles. These deadlines may be re-negotiated, depending on the type of publication.
- Newspapers set deadlines for copy and for advertising. *Copy deadlines may be negotiated, depending on the size and complexity of the story; advertising deadlines are usually firm.*

6. Provide a reasonable time frame within which assignments will be accepted.
7. Establish fair consequences for work not submitted on time which place the emphasis on achievement, e.g., make-up responsibility, parent contact, out of class follow-up.
8. Take significant actions early in the game to help students break old, bad habits such as failure to do assignments or tests. Involve them in encouraging dialogue and specific instruction. Contact parents for assistance and support.
9. Help students to understand why they may be having difficulty submitting assignments on time and show them how to take some initiative to identify their particular problem and to seek assistance in solving it.
10. Let students know very clearly that you cannot give them a grade on work that they do not submit. To earn the credit, they must demonstrate that they can meet the expectations in your subject.

Whatever the method, teachers should feel that they have control of the process while still providing a measure of flexibility for students.



To ensure that students have every opportunity to submit quality work on time, teachers also need to establish clearly (on paper) the expectations for the task or assignment, help students to get an even better "picture" of the task by using exemplars which they can deconstruct, provide formative experiences such as sample matching or peer feedback, and support those students who will predictably struggle with the task without intervention. Teachers may wish to empower students to deal with their own difficulties by sharing self-reflection strategies such as those in Figure 2.

Next Steps

The new curriculum policy and the new report card in Ontario represent a next step in assessment philosophy which many teachers, clearly, are preparing to take. New methods of tracking student achievement separate from learning skills will require a shift in thinking. Some teachers may be skeptical about the efficacy of providing more accurate details about students' strengths and weaknesses until they can discern the ways in which that information resounds with students, parents, and the wider community.

And the implementation dip will mean that change requires a great deal of thinking and work to get new systems up and running in the classroom. However, the possibility exists for students to develop a very clear understanding of their abilities and responsibilities, and hopefully, with more information available to them, teachers, students, and parents will be empowered to make a difference in achievement, and to provide high level learning for a greater number of students.

References

Earl, L. & Cousins, J. B. (1995). *Classroom assessment: Changing the face, facing the change.* Toronto: Ontario Public School Teachers' Federation.

King, A.J.C. (1986). *The adolescent experience.* Toronto: Ontario Secondary School Teachers' Federation.

King, A.J.C., Warren, W. K., & Peart, M.J. (1988). *The Teaching experience.* Toronto: Ontario Secondary School Teachers' Federation.

King, A.J.C., & Peart, M. J. (1990). *The good school.* Toronto: Ontario Secondary School Teachers' Federation.

King, A.J.C., & Peart, M. J.(1994). *The numbers game.* Toronto: Ontario Secondary School Teachers' Federation.

O'Connor, K. (1999). *How to grade for learning.* Arlington Heights, Illinois: Skylight.

Stiggins, R. J. (1997). *Student-centered classroom assessment* (2nd ed.). Upper Saddle, NJ: Merrill Prentice-Hall.

Wiggins, G. (1993). *Assessing student performance: Exploring the purpose and limits of testing.* San Francisco: Jossey-Bass.

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Why is your assignment late?

A. You could have done it, but did not:
- ➣ Was there a personal difficulty which prevented you from completing the assignment on time?
- ➣ Were you disorganized? Did you simply procrastinate? Refuse to get down to work?
- ➣ Do you have too much on your plate—too many activities in which you are involved?
- ➣ Are you lazy and you don't really care? (Not too many students fit here.)
- ➣ Do you have a perfectionist complex—that is, you can't bear to begin something unless you know it can reach the ideal vision in your mind?

B. You could not do the assignment:
- ➣ You lacked understanding of parts or all of the assignment, or the task description was too complex or demanding.
- ➣ Assignments which seem straightforward for most are very difficult and time-consuming for you.
- ➣ You realize that you lack some basic skill sets underlying the assignment, e.g. research skills, organizational skills, reading skills, writing skills.

Take charge: Know when and whom to ask for help with any of these situations.
- ➣ Can your teacher help?
- ➣ Can your parents or an older brother or sister provide some assistance or advice?
- ➣ Is peer tutoring or extra help available in the subject causing you difficulty?

Barb Bower and Carol Rolheiser

Portfolio Assessment – Organizing for Success!

As the movement toward greater accountability and standardized testing has grown, so too has the movement to explore alternative assessment. Increasingly, educators are exploring the possibilities of one notable mode of alternative assessment—portfolio assessment. Portfolios can be part of a balanced approach to assessment that enables educators to create multi-dimensional portraits of learners. The challenge for teachers in incorporating portfolios into their repertoire of assessment and evaluation practices is finding ways to make the process manageable, both for them and for their students. Regardless of the educational setting in which portfolios are used, there are a number of common areas that demand decision-making. A flexible framework known as "The Portfolio Organizer" helps teachers to make key decisions about the portfolio model that they wish to use with their students. The Organizer can also be used to assist in the design of teachers' professional portfolios.

The Organizer outlines ten key areas of decision-making. These areas are outlined below, along with brief descriptions. Whether you teach at the elementary, middle school, high school or university/college level, these areas can be adapted in order to create a portfolio model that will be meaningful as well as manageable. The ten areas are not sequential, but rather, are fluid, requiring attention prior to portfolio implementation, as well as throughout the evolution of the process.

1. Determining the Basics of Student Portfolios

Initially, key decisions need to be made regarding the following: purpose, type, audiences and time frame for the portfolio. The purpose must be made clear from the very beginning of the process, because it influences so many other decisions that will be made later on. For example, your purpose might be to involve students in choosing key pieces of work and self-evaluating those pieces. If, on the other hand, your purpose is to have students' portfolios contain work samples that are connected to specific learning expectations or standards, then your decisions regarding how work is collected, selected and evaluated will be affected.

> *"For those who say portfolio assessment is challenging, time-conouming, and complex, we agree; but good teaching and learning are all these things"*

The type of portfolio that your students maintain is also important. A "best work" model, for example, will contain students' best efforts only, while a "growth" model will contain samples of work that reflect students' growth over time, including strengths and weaknesses. Each model has its advantages and disadvantages, and each influences what students select to put into their portfolios in order to create portraits of themselves as learners.

Audiences for the portfolio will impact the process as a whole. Are other educators, parents or other students going to view students' work? Students need to know this from the beginning, because it may influence the learning samples that they choose as well as the content of the reflections on their work.

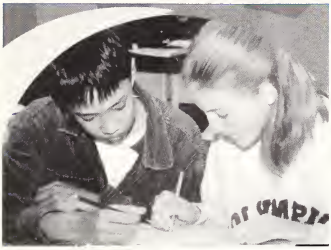
The time frame for the portfolio is also important. This may be influenced by key dates in a school's calendar, for example, final examination dates or reporting periods. Teachers may design a portfolio model that focuses on documenting learning carried out over a short period of time, such as during a specific unit or theme. Conversely, they may choose to have students select and reflect on their work over an extended period of time, such as a full term or year.

2. Selecting Categories for Entries

Portfolio entries need to be organized so that a broad range of students' abilities and talents can be incorporated into the collections of work. Categorizing entries ensures that students' work is targeted appropriately to relevant areas of learning. A "Multiple Intelligences" portfolio, for example, might include categories based on the key intelligences identified by Howard Gardner (1983). Alternatively, a mathematics portfolio might include categories based on the units of the course, so that students would be sure to include pieces of work reflecting their efforts in various aspects of the curriculum. The categories help guide both the teacher (i.e., in ensuring that learning experiences are targeted to these categories) and students (i.e., in ensuring that learning samples are selected for these categories).

3. Identifying Learning Expectations and Criteria

Key learning expectations and evaluation criteria need to be outlined at the beginning of



the portfolio process. These might be based on prescribed curriculum achievement categories, or they might be chosen through a process of negotiation between the teacher and students. For example, if problem solving is to be an aspect of students' achievement demonstrated in their portfolios, then this would be identified at the beginning so that learning samples involving problem solving would be selected by the students for inclusion in their portfolios. If the portfolios are to be graded, then descriptors (as in a rubric) would have to be provided for students early on so that they would clearly know what was expected of them. This initial area of decision making, therefore, is related directly to area #9 of the Organizer—Evaluation and Grading. Clarity of these early decisions ensures that later portfolio judgments are viewed as fair by all portfolio stakeholders, especially the students.

4. Learning Samples

Learning samples are the pieces of work that students produce—the evidence of their learning. Ideally, students have a great deal of choice as to what goes into their portfolios. This is key to ownership and student involvement in the process. This choice, however, is guided by decisions made by the teacher and students regarding the portfolio purpose and type, along with the categories, learning expectations and criteria. At the same time, a teacher may want to have certain learning samples included in the students' portfolios. This is reasonable provided that the students know before they do the work that particular samples will be included in their portfolios.

5. Reflections

Reflections are the most critical components of the portfolio process, because in doing them students develop metacognition; they think about their own learning and, ideally, identify their own strengths and areas for growth. Each learning sample in a portfolio should be accompanied by a reflection that indicates why the sample was chosen, and what that sample reveals about the student's learning. A portfolio entry, then, consists of a learning sample plus a reflection. In the beginning, modelling reflections for students helps them to deepen their own thinking. Providing a variety of "prompts" or starters is also important (e.g., "This learning sample is important to me because..."; "This work shows that..."). The process of reflection is what differentiates a portfolio from a work folder, and it is what enables teachers to "see" into their students' hearts as well as into their heads.

6. Storing and Organizing Portfolios

Decisions need to be made with respect to the type of portfolio "container" used as well as available storage space in the classroom. Portfolios can be kept in binders, folders with pockets, pizza boxes, etc., depending on the age level of students as well as on the size and type of learning samples that will be placed into the portfolios. Storage of the portfolios will depend on space availability as well as security concerns. Students' work should be accessible (e.g., in a filing cabinet drawer) but it should also be kept somewhere safe so that students' privacy is respected and their work will not be lost or disturbed.

Organizing the contents of a portfolio can be facilitated by the use of a table of contents. A working table of contents may be maintained over the course of a term, as students date and title work that they place into their portfolios. A final table of contents that is polished and organized in a specific way (e.g., chronologically or favourite work first) then may be created at the end of the process, so that audiences for the portfolio can scan it quickly in order to see what the portfolio contains.

7. Sharing the Learning

A particularly important component of portfolio assessment is the sharing of students' learning. Students have traditionally shared their learning with their teachers. Using portfolios allows for the inclusion of many other stakeholders in the learning process. The learning samples and reflections which are integral parts of portfolio assessment can and should be shared with a wide variety of audiences: peers, teachers, parents, and other significant adults. Peer responses can be particularly powerful. They should be modelled, and should only occur when an appropriate comfort level exists in a class. Audiences can respond to students' work orally (e.g., in student-led conferencing) or in writing (e.g., through structured parent or peer response forms). Regardless of the format, interacting and sharing ideas and suggestions about students' work enriches the learning process as a whole. This sharing adds both authenticity and meaningfulness to students' learning.

8. Setting Goals

Setting specific goals near the beginning of the portfolio process and revisiting these goals periodically helps students to focus on specific areas for growth. Students may need guidance from the teacher in setting goals that are appropriate—that is, achievable and yet challenging. Empowering learners to select their own goals increases the chances that students will value what they are learning as they work towards those goals. As one student observed, "Setting goals for yourself helps you identify your strengths and weaknesses and makes you aware of them. Having personal goals also gives you a strong sense of your...capabilities and helps you motivate yourself to make the most out of them." As students set goals, teachers should work with them to develop and record action plans that will help them achieve those goals.

9. Evaluation and Grading

Teachers must consider whether simply to evaluate students' portfolios (i.e., judge them) or whether to grade them (i.e., assign a symbol to that judgment for the purposes of reporting). This decision will depend on the purpose for the portfolio, as well as the grade level of the students. If a rubric has been established early in the process, students, teachers and other audiences may use it to evaluate the students' portfolios. Teachers may use those judgments in assuming final responsibility for grading (if grading is a part of the portfolio process). An essential guideline is that students need to know from the very beginning who is

The creation of professional portfolios is also on the rise as educators become more involved in directing their own professional development…

going to evaluate and/or grade the portfolios and how this will be done.

10. Getting Started with Students

This area of the Organizer targets "tips and dips" for getting portfolios started with your students. Introducing the concept of portfolios by having students bring in and talk about their favourite collections, for example, is a powerful beginning for the portfolio process. A first portfolio entry is often an "All About Me" entry that maximizes student success and involvement. "Starting Small" is also recommended, especially for teachers who are incorporating portfolio assessment into their programs for the first time. Working with other colleagues who want to explore portfolio assessment also provides the support and dialogue necessary for working through challenges and celebrating successes.

The creation of professional portfolios is also on the rise as educators become more involved in directing their own professional development and documenting their performance. The ten areas of *The Portfolio Organizer* that outline the decision making required for students' portfolios can also be applied to the development of professional portfolios (see Rolheiser, Bower & Stevahn, 2000, for elaboration). When teachers and students engage in the portfolio process simultaneously, many exciting possibilities emerge for co-learning.

"For those who say portfolio assessment is challenging, time-consuming, and complex, we agree; but good teaching and learning are all these things" (Rolheiser, et al., 2000, p. viii). Considering the key areas outlined above will help teachers to make decisions that will work for them and for their students. Ideally, as teachers become more comfortable with the process as a whole, they will involve students in a great deal of the decision making, and they will encourage the sharing of learning with as many audiences as possible. This process can bring all the stakeholders in education together—students, teachers, parents and administrators. Ultimately, portfolio assessment can be a vehicle through which teachers and students may move from being assessment adversaries to being assessment partners.

Whether teachers are trying portfolio assessment for the first time or are retiring their use of portfolios with students, it is apparent that they come to value the many worthwhile learning experiences that are inherent in the process. Portfolio assessment "occupies an interesting in-between area between the clean, artificial world of carefully controlled assessment ('Take out your pencils. Don't turn over your books until I say go'.) and the swampy real world" (Elbow, 1991, p. xii). It is that very "in-between area" capturing process and product that many teachers find exciting and appealing. Ultimately, portfolios are an alternative form of assessment well worth exploring.

References

Elbow, P. (1991). In P., Belanoff, & M. Dickson, (Eds.), *Portfolios: Process and product*. Portsmouth, NH: Hienemann Educational Books.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Harper Collins.

Rolheiser, C., Bower, B., & Stevahn, L. (2000). *The portfolio organizer: Succeeding with portfolios in your classroom*. Alexandria, VA: Association for Supervision and Curriculum Development.

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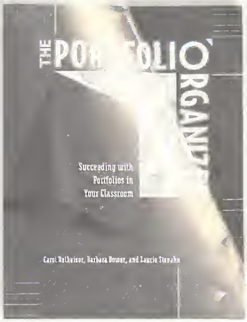
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This book is distinguished by the presence and integration of a conceptual framework and a superb array of practical examples.

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MAKING A DIFFERENCE

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Secondary Schools—A Martian Chronicle

Damian Cooper and

Nanci Wakeman-Jones

A popular joke some years ago involved a Martian expedition to conduct research about schools on Earth. When the expedition returned to Mars, the Martian leader asked, "So what did you discover about how Earthlings learn?" "Well," replied the expedition leader, "Earthlings have these buildings called schools. They appear to be places where young Earthlings travel everyday to watch old Earthlings work."

The story speaks to a widely held image of teaching in which the perfect lesson is viewed as a finely tuned performance *by the teacher*. If the current secondary school reform is to be successful, it must be accompanied by a shift in teachers' understanding of their role. Specifically, the preoccupation with covering the curriculum will have to give way to a focus on the results that *students* produce as a consequence of their learning. Put another way, the focus will have to shift from what is taught to what is learned.

The difficulties our teachers are experiencing as they grapple with the issue of curriculum control is well illustrated by initial research into the 1998–99 pilot of the Millennium Project. (See Section 1 of this *Orbit* issue where Michèle Schmidt and Leo Plue report on their study of the pilot phase of this project.)

The Millennium Project, which involves Grade 11 students from schools in five Ontario districts, allows teachers and students to experiment with a different kind of learning experience. Students work in small groups for several weeks solving a real-life problem in their school or community. The problems are carefully constructed in that they include just enough information to suggest how students should proceed with an investigation but never enough information to enable students to solve the problem without further inquiry. In this kind of learning experience, students are taught the curriculum in a "just in time" manner—they learn what they need to learn in order to solve the problem. Following the pilot, a sample of teachers and students was interviewed about the experience. Their responses are summarized below.

Control of Curriculum

Teachers' responses frequently reflected their reluctance to "let go" of their traditional method of delivering the curriculum. Although the project required students to demonstrate essential skills such as the ability to conduct independent research, to solve real-world problems, and to communicate with adults outside of school, one teacher stated:

"I wouldn't do it in an English class where I had to take away six weeks out of my course."

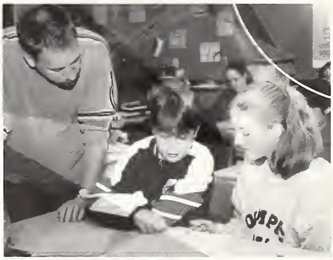
The choice of words used by this teacher is most significant. The notion of time "out of my course" reflects the kind of ownership and control many secondary teachers feel about their curriculum. This sentiment is echoed below:

"The biggest problem was time. The project took valuable time out of the curriculum. And I can't imagine how you can take 20 days out of your curriculum. I don't know how you did that."

Many teachers regard curriculum as a body of knowledge, with a definable beginning and ending, which has to be "covered" by them, rather than learned by their students. They have difficulty seeing skills such as problem-solving, conducting research and communicating as an essential part of the curriculum.

Another reason that secondary teachers are so reluctant to loosen their stranglehold on the curriculum is their fear of not knowing all the answers. As the disseminator of all knowledge, the teacher *must* know all the answers. The metaphor of the student as the empty vessel to be filled by the all-knowing teacher is not easily relinquished. As one teacher remarked,

"I felt a bit inadequate. I certainly did ... I would have liked to have had more knowledge [about the subject]."



As long as teachers' understanding of the word "curriculum" focuses primarily on knowledge acquisition, then the teacher is going to feel compelled to know everything. Today, there are such vastly superior sources of knowledge available to students that the role of the teacher *must* change accordingly. Clearly, this will also require a change in the expectations students have for their teachers.

If a new form of school is to result from Secondary School Reform initiatives, then educators, and indeed the public at large, will need to change their image of the act of teaching so that the *performer* is the student, not the teacher.

Control of Students

In addition to needing to control their curriculum, many teachers also feel a need to exercise control over the actions of their students. Another teacher involved in the Millennium Project Pilot remarked,

"It was very difficult to know where students were at because they were all over the school. Sometimes they were visiting other businesses, and so that, I think, was a little bit uncomfortable."

The discomfort that the teacher alludes to stems from a mistrust of young people. Teachers assume—sometimes with good reason—that if students are not in their sight—that is, in the classroom, sitting in rows—then they will be "goofing off." Students will not be "doing" the curriculum. Teachers do feel, as they should, accountable and responsible for the young people in their charge. The irony is that even when students are sitting in rows in the classroom watching the teacher perform, they are often not attending to the curriculum. For example, in a recent study, a group of senior students was asked to keep track of the number of times per class that they "tune out." Students identified five times as the average per class (Wakeman-Jones, 1999).

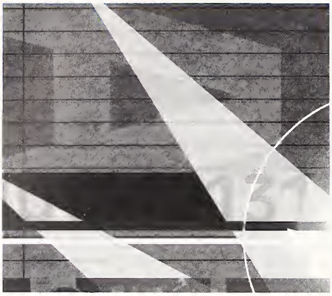
And yet when students do have the opportunity to take charge of their own learning, the benefits can be significant. Many of the students involved in the Millennium Project expressed their enthusiasm for the engaging nature of the real-world problems they worked on. One teacher observed:

"It just goes to show how much they're seeking non-teacher-directed things to do. They really liked the open-endedness."

Another teacher remarked:

"I was really pleasantly surprised that I almost never had to talk to a group and say, 'you know we're supposed to be working on the Millennium Project, you know not …'. And that's not to say that there weren't individuals that did that but I think the other members of the group would sort of bring them back on task and get the job done."

What these observations indicate is that the key factor in promoting student learning is not the structure and control evident in the typical classroom, but the level of student engagement with the learning. From an instructional point of view, this requires the teacher to design opportunities for all students in the class to be engaged in meaningful learning. Many teachers complain that students have such short attention spans these days because they are constantly exposed to highly stimulating media. We often hear teachers say, "Kids expect school to be fun, to be entertaining." This is not what students demand of school. But they do demand engagement; they demand, consciously or otherwise, to be involved in meaningful work that challenges them, and that they see as worthwhile. And this means that they need to be actively involved in their own learning, as opposed to passive receivers of information. For this to happen, students must be given far more control over their own learning.



Today, there are such vastly superior sources of knowledge available to students that the role of the teacher must *change.*

A true standards-based curriculum shifts the focus from curriculum coverage by the teacher to a focus on all students being required to produce quality work. For this type of learning to occur, teachers need to be both more involved and less involved with their students. They must be more involved in terms of getting to know their students as individuals so that they can exert more or less control and provide more or less structure, depending on the needs of individual learners. The outcome of this shift leads to much richer learning. But many secondary teachers have difficulty modifying their program for individual students and letting go of their control over the learning process.

Control Over Evaluation

Unfortunately, letting go causes some teachers to become anxious about how they will evaluate achievement. They begin to reveal their underlying beliefs about the role of the teacher as evaluator. Consider this statement by a teacher involved in the Millennium Pilot:

"A lot of it revolved around marks because you know this is 20 days out of an English class, and so I needed to come up with some marks."

Again, the language is telling. The teacher does not say, "The students needed opportunities to demonstrate their achievement." Rather, the notion is that the teacher *has* to "come up with some marks." The need to retain control over both the content of the curriculum and the time taken to complete the course is directly related to teachers' beliefs and practices regarding evaluation of student achievement. If course content and time are controlled, then what students learn can be easily quantified. Hence the preoccupation of both teachers and students with marks. As long as teachers teach the same material to all students in a clearly defined time period, then evaluation is simply a matter of measuring how much of what was taught has been retained by each student. The currency of achievement in the eyes of teacher and students alike is the numerical mark. Part of the teacher's role, therefore, is to be the accountant, keeping a running tally of the set of marks for each student.

Rick Stiggins has chronicled education's preoccupation with numbers. But he reminds us: "Not everything that can be counted counts, and not everything that counts can be counted."

Meaningful and useful assessment does not take the form of numbers assigned by a judge. Imagine if a figure skating coach held up a sign at the end of a skater's practice routine which said "4.5." This is not helpful to the skater when she is trying to improve her performance. The coach and skater need to collaborate on assessing the strengths of the routine and the areas needing improvement. Only through this shared understanding is the skater able to improve her performance. Eventually, it is necessary to assign a "mark" but this only comes at the end of the polished performance.

This example highlights the difference between "assessment" and "evaluation." Assessment should serve primarily to promote learning, while "evaluation" should inform students and parents about the quality of achievement, relative to provincial standards. Seen this way, assessment consists of information to the student about how to improve, whereas evaluation consists of levels, letter grades, and/or percentages that rate the quality of student performance.

Traditionally, teachers have not differentiated between assessment and evaluation. A numerical mark is assigned to everything that students do, and the cumulative total of these marks ends up on the report card. And such is the power of the numerical mark that students and parents alike have accepted these numbers as absolute, particularly if at the end of the process, the cumulative total is expressed to two decimal places!

For significant reform to occur in our secondary schools, the twin tyrannies of teacher control over learning and the fixation with numerical marks have to be displaced. The naysayers will respond by saying, "Unless I mark everything, my students won't do the work." Such is the power of the self-fulfilling prophecy. We say, "Replace some—not all—of the marks students receive with specific feedback on how they can improve and watch what happens." And we say this because, to continue with our example, the ice-skating performance is ultimately judged, but only after a great deal of diagnostic and formative assessment has occurred to enable the skater to polish the performance to a high standard. Again, collaboration between teacher and student is key. Rather than evaluation being a process which the teacher performs on the student after the performance, teacher and student work together to bring about improvement.

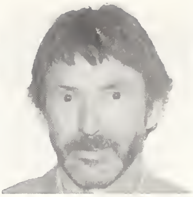
"Kid-watching"

In order to provide students with useful feedback on how to improve, teachers need to be highly skilled observers and describers of student performance. Unfortunately, these are not skills that have been required of secondary teachers in the past. They were expected to be "accountants," not observers. Teachers' lack of experience at "kid-watching" was clearly evident among those involved in the Millennium Project Pilot. Most expressed discomfort with the assessment rubrics which had been developed. The rubrics addressed the essential skills embedded in the tasks: problem-solving, researching and communicating. To use the rubrics effectively, teachers needed to observe student performance and then match what they saw with the indicators on the rubrics.

...the key factor in promoting student learning is not the structure and control evident in the typical classroom, but the level of student engagement.

Observing students and providing them with useful feedback is a critical teaching skill. Unfortunately, much of the air time given to Ontario's new "rigorous" provincial standards has left teachers and parents with the impression that there is no longer a place for the teacher's informed judgement. Many people are interpreting the standards to mean that now, more than ever, teaching and learning will be quantified. This mistaken belief is based upon a fundamental misunderstanding that is plaguing teachers, administrators and program staff across Ontario as they implement the new curriculum.

As Grant Wiggins has pointed out, many educators and politicians confuse "standards" with "standardization." Ontario's new standards do not require that across Ontario, at a given moment on a given day, all students learning Grade 9 mathematics will be on the same page of the same textbook! Rather the curriculum standards (Expectations) provide the reference point to ensure that all students are taught essential skills and acquire essential knowledge. They are a map but there are many possible routes by which students might reach the destination. The performance standards (Achievement Charts) provide broad, common reference points against which students are to be evaluated. They ensure that all students are held accountable for producing quality work. However, a key feature of the achievement charts is that they require teachers to make professional judgments about student performance. If the implementation of standards is misinterpreted as a move to standardize teaching and learning, then rather than lessening their control over the curriculum, their students, and evaluation, teachers will believe they need to exert even greater control. The results of such a move will have dire consequences for the quality of learning for Ontario's students.



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There is great potential for the current reform movement to bring about significant improvement in the quality of teaching and learning in Ontario's secondary schools. Unfortunately, reform takes more than a set of policy documents. It requires teachers to objectively examine their current practice and to find in the tools of reform good reasons for changing what they do. We have argued that examining their need to control all aspects of the teaching/learning process will be necessary if significant change is to occur. Let us hope that if the Martian visitors were to return to Earth five years hence, they would discover that our secondary schools have indeed been reformed and that they are now places where old Earthlings go everyday to watch young Earthlings work.

References

Schmidt, M. (1999). The Millennium Project: A pilot study: From Teachers' and students' persepctives. (A report prepared for The Assessment Training Consortium, Sept. 1999).

Stiggins, R. J. & Faires Conklin, N. (1992). *In teachers' hands: Investigating the practices of classroom assessment.* New York: State University of New York Press.

Wakeman-Jones, N. (1999). Unpublished action research. Halton District School Board.

Wiggins, G. (1991, Feb.). Standards, not standardization: Evoking quality student work. *Educational Leadership.* 18–25.

Lynda Colgan

Testing the Big Ideas in Mathematics

In December 2000, tens of thousands of students across Ontario will participate in the Education, Quality and Accountability Office's (EQAO) first survey test of Grade 9 mathematics. Two things are certain. The first is that the new Ontario mathematics curriculum for secondary schools will be the "bar" used to determine both the content addressed and the approach used in the test instruments. The second certainty is that the "bar" is high.

No one knows for certain what questions will be asked, but we do have a fairly accurate vision of what the Grade 9 test will look like. Using the provincial Grade 3 and 6 tests as our indicators, we can assume that the Grade 9 test will not be an attempt to evaluate students' "glancing familiarity" (Gardner, 1999) with hundreds of facts, concepts and formulae. This test will be a rich opportunity to measure what we as math educators truly value: the complex web of "big ideas" that are at the heart of mathematical thinking—reasoning, modelling, problem solving, and communication using multiple representations.

Assuming that the Grade 9 test will be constructed in the spirit of the Primary and Junior Division tests, it is almost certain that students will face "problematic situations"—challenging and genuine dilemmas that will measure students' problem solving, conceptual understanding, application of mathematical knowledge and processes, as well as their ability to effectively communicate all of the above. The design of the test is certain also to provide empirical feedback on students' mathematical behaviours such as risk-taking, creativity and tenacity.

This type of performance-based assessment makes assumptions about the type of instructional setting, the type of problem and the type of mathematics that will be the norm for our classrooms. And so, *now* is the time for each of us to start thinking critically about what the provincial test means for our classroom—beginning with a discussion of the types of questions that it is likely to ask and culminating in how we measure the very different types of products that students may submit in response to those questions.

Rich Assessment Tasks

In order to help classroom teachers identify potentially rich assessment tasks for their own classrooms, the following summary may be useful. In general, "problematic situations":

- go beyond correct computations
- require careful and thoughtful investigation
- provide students with an opportunity to demonstrate their ability to apply core mathematical concepts/curriculum expectations in a variety of ways—including physical models, pictures, graphs, computer representations, or narratives supported by computations
- require students to assume an active role as mathematician
- demand a high level of proficiency in students' ability to communicate their mental images of both mathematical process and content

In other words, rich assessment tasks provide opportunities for students to communicate their strategies, reflect on their reasoning, thoughtfully evaluate their solutions and demonstrate the integration of various "chunks" of knowledge while also requiring students to organize many different and explicit elements within correct solutions. This is a far cry from asking students to calculate the area of rectangles or the volume of rectangular prisms!

Needless to say, the test could be quite "foreign" to Grade 9 students unless they have had many experiences in constructing solutions to such qualitatively different types of mathematics problems. Before encountering rich assessment tasks for the first time in the formal setting of the provincial assessment, it is imperative that students have many opportunities to complete a variety of such tasks.

Evaluating Rich Assessment Tasks

Clearly such solutions cannot be marked "right" or "wrong," nor can feedback on the students' performance be accomplished with a simple "6/10" marked in red pen on the upper left-hand corner of the page. The key to the new curriculum—and the styles of student assessment and evaluation experiences it embodies—is that expectations are unambiguous. Students are given a vision of what excellence looks like as well as the necessary skill set required for discriminating between problem types and the range of appropriate responses.

What will be required to evaluate students' solutions to rich assessment tasks is an instrument that we can use to judge the many different elements that could be included in a full solution. The best instrument for this purpose is a comprehensive scoring guide commonly known as the rubric. Any rubric has three fundamental features: evaluative criteria, quality descriptors and a scoring guide. Rubrics are used to assess significant demonstrations in which students are called upon to display high-level skills, techniques and processes in an authentic way, i.e., the task resembles a real-world challenge, is interesting (maybe even fun!) and requires inventive responses.

These features of rubrics guide both teachers and students, helping them to distinguish acceptable responses from unacceptable responses, identify qualitative differences in responses and make sense of what a score value means. Rubrics are scoring tools, but they are also instructional resources in that the communication of the criteria can illuminate for students what essential mathematical ideas, procedures and tools they need to master.

The rubric that will be employed by the EQAO for the Grade 9 survey test is likely to strongly resemble both the one that appears in the official mathematics policy document and those that have been used successfully in the province-wide Grades 3 and 6 survey tests. It will be based on four levels of performance (Levels 1 – 4, with Level 3 (70 – 79%) being the Provincial Standard) across domains such as *Knowledge and Understanding of Mathematical Concepts, Problem Solving/Thinking/Inquiry, Applying Procedures and Making Connections,* and *Communicating in Mathematics.*

Since a rubric is a matrix which delineates levels of performance as well as the set expectations or standards of achievement, it can be used as a set of "look-fors" that a teacher can use to place different dimensions of a solution along a continuum.

One dimension could lay out the explicit elements that provide concrete evidence of the student's repertoire of problem solving processes and techniques—that is, the degree to which the student can:

- explain the task and/or restate the problem
- identify the assumptions, extract the task(s), select relevant information or disregard extraneous information
- organize information in effective and efficient ways (e.g., choosing from tables, models, patterns, spreadsheets)
- apply explicit strategies such as estimation, applying an algorithm, answering a simpler but similar problem, working backwards, or acting out the problem (modelling)
- select an appropriate strategy and implement it to find a correct solution
- state conclusions or generalizations based on the solution
- connect or apply the solution to other strands within mathematics and to other domains

Along another dimension, a carefully crafted rubric can provide the cues by which teachers can extract evidence that the student knows and can use the mathematics reasoning process—that is, by:

- making valid observations based on available data
- recording data using appropriate formats, e.g., models, charts and/or graphs
- organizing data to illuminate, describe and extend patterns
- formulating generalizations and conjectures based on the data
- validating the generalizations using logical arguments or counter examples
- making connections between known facts and the problem to be solved
- validating her thinking.

The rubric's dimensions can also be used to extract the evidence that demonstrates the degree to which a student knows and can use the mathematical communication process by:

- constructing an effective and efficient explanation of results, reasoning and extensions;

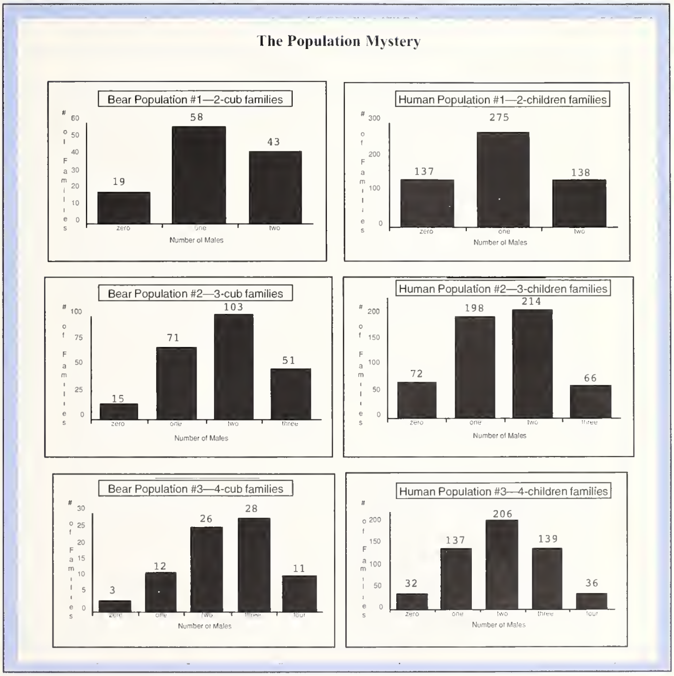

Figure 1. A team of researchers has been studying the population of a "mathematical" bear. They have been tracking bear families and keeping a record of the number of male cubs in each family. They think that they have collected some rather odd findings. To help understand their data, they have assembled some similar data for humans. They surveyed a series of human families with similar numbers of children and made a note of the number of boys. All of the results are shown above in graphical form. The researchers have concluded that the probability that a mother bear will give birth to a male cub is different from the probability that a human mother will give birth to a son.

No one knows for certain what questions will be asked, but we do have a fairly accurate vision of what the Grade 9 test will look like.

- employing mathematical terms, notation and symbols to communicate ideas and thinking
- explicitly linking multiple representations—representing and connecting information via diagrams, tables, graphs, symbols

Finally, the rubric can summarize the evidence that can be used to measure how well the student understands and makes connections between core content/concepts by:

- giving appropriate and correct answers to questions about key concepts
- successfully completing tasks (e.g., getting correct answers) that require the application of recently acquired skills and techniques in both familiar and novel situations
- clearly and convincingly communicating a facility with the content specified by particular curriculum expectations within a strand
- assembling individual curriculum expectations into conceptual, procedural or structural constructs which can be used to solve complex problems
- applying individual content items to connect conceptual, procedural or structural concepts between strands and across disciplines
- using vocabulary and concepts from other disciplines to describe specific curriculum expectations

What could a "rich assessment task" look like on the Grade 9 survey test?

In general, it is rare that a single mathematics problem, unless it is exceptionally designed, can be assessed along multiple dimensions using multiple criteria. Using the Grades 3 and 6 survey tests as the implementation model, it follows that we might find that the investigation component of the Grade 9 instruments will be organized into "families" of problems that we can view holistically and collectively in order to obtain an accurate snapshot of student achievement.

This rich assessment task requires students to solve a population mystery (Figure 1).

Given statistical information about human populations and bear populations in the form of a set of graphs, students are required to analyze the data critically as presented, looking for clues that will help them to evaluate the validity of a researcher's conclusions. They are asked to evaluate the relationship between probability and statistics by applying probabilistic arguments to interpolate and extrapolate values/decisions from the visual data. Finally, they address the probability issues that surround us daily by illustrating the importance of justifying real-world conclusions using mathematically-defensible arguments. This particular "problematic situation" is designed to assess students' ability to integrate skills from *graphing* (displaying information) with those from *statistics* (discussing data numerically) and *probability* (the mathematics of outcomes).

This problematic situation presents students with a novel set of information. The solution requires that students examine graphical displays through a qualitative lens, looking for symmetry and other patterns that can form and inform quantitative arguments. They must use critical-thinking techniques as they interact with the role of probability and statistics in society—in this case, a media report about a bear population. Students assess the strengths, weaknesses and biases of samples and data collection methods; critique the ways in which the statistical information and conclusions are presented; and evaluate decisions based on probability that may be a combination of theoretical calculations, experimental results and subjective judgements.

In order to solve this problematic situation, students will need to formulate questions for investigation, collect and display data, and read and interpret graphs. They need to perform accurate probability calculations using the numerical definitions of probability (including conversions between decimal, percent and fractional forms), and they require strategies for listing all the possible outcomes for an events (probability path, tree diagrams).

The obvious difference between this assessment task and traditional paper-and-pencil test problems is that the expectations are addressed completely within the context of a large and novel, applied problem. The test question is not so much about answers as it is about providing students with an opportunity to demonstrate their mathematical knowledge and insights by investigation, exploration, thoughtful justification, and making connections.

Student Performances

Some students may use a narrative approach to address the family of problems. These students may describe how the graphs are actually paired off so that bear families and human families with the same number of cubs or children are next to each other on the page. These same students may write that the human graphs appear to be more 'balanced'; whereas the bear graphs appear to be 'lop-sided'. These students recognize the implication of the symmetry in the graph of humans and infer from the lack of symmetry (balance) that there are more male bear cubs. They may extend their discussion to say something really quite significant about graphs and probabilities by stating that a symmetrical graph tells us that there is a 50-50 chance of a baby being a boy and discuss why it is likely that the non-symmetrical shape of the bears' graphs has caused the researchers to question the birth probabilities for the bears.

These same students may examine the graphs more closely, noticing that the human graphs have more features than just balance/symmetry. Observing the "hump" in

The test question is not so much about answers as it is about providing students with an opportunity to demonstrate their mathematical knowledge and insights

the middle, the short bars off to the ends and the taller bars towards the middle, these students could make comparisons to coin tossing experiments in which it can be shown that when two coins are tossed, it is common to get one head and one tail more often than either two heads or two tails and extrapolate to gender—boy, girl, head, tail. These students deduce the probability associated with a single event from the given distribution and explain clearly what the physical configuration of the graphs says about birth probabilities, generating a probability tree or systematic list to support and clarify written explanations.

Other students will examine the quantitative information contained in the middle graphs—that is, that there were 15 bear families with no male cubs and 72 human families with no male children. They will use the numerical data supplied by the graph of male bear cubs to make informed deductions about the female cub population. The bottom graphs tell us that in families with 4 cubs or children, there were 3 families with no male cubs and 32 families with no boys. They will focus on how the graph tells us that there are 550 families in all and that 25% of them should have zero boys—that is, 137.5. The students who use this approach will notice that in the 3 cub families, there are 51 families with three males, 15 families with three females and 15 families with zero male cubs. They will also be able to conclude that the 3 cub family graph tells us that in the 71 families with one male cub, there must be two female cubs. They will find the total number of male cubs (15 families with none, 71 families with one, 103 families with two and 51 families with three) or 0 + 71 + 206 + 153 = 430 male cubs. Using the fact that there are 240 families with three cubs each, they can calculate the probability that a cub will be male is 430/720 or roughly 60%.

Whether a student initially took a qualitative or quantitative approach, everyone will be called upon to identify some assumptions made about the data—for example, were the bears all born during the same season? Do these numbers represent the number of bears born or the number of bears that survived to a certain age? Everyone will be required to explain why there are more male cubs, referring to knowledge from other domains—for example, they will need to ask whether the males are hardier or whether the females are more vulnerable to predators. In conclusion, they will return to mathematics by asking whether the probability of a mother having a male in the first place is greater than having a female and extend their solutions to compare the reported distributions of bears to what we would expect if the probability of genders was equal.

Conclusion

This "problematic situation" was selected to illuminate the problem-type that we can expect to encounter on the Grade 9 test of mathematics. It shows us that it is possible to select or create mathematical tasks that can capture students' curiosity without separating mathematical thinking from mathematical concepts and skills (NCTM, 1991). It emphasizes that good tasks are challenging but within reach—that is, the methods used to reach answers are familiar in other contexts. It demonstrates that rich assessment tasks require multiple perspectives and interrelated mathematical ideas. It illustrates that the purpose of the problematic situations that students will encounter on the test is to measure the degree to which the student can think and function independently of the teacher. It also emphasizes that it is time to change how we teach and assess mathematics now. Trying to 'cram' in December won't do it.

NOTE: With sincere appreciation to Peter Harrison, Mathematics Coordinator, Toronto District School Board for creating the "Bears" problem that is central to this article.

References

Borasi, R. (1992). *Learning mathematics through Inquiry.* Heinemann: Portsmouth.

Gardner, H. (1998). The TIMSS, the *Times* and the Times. *The Harvard Education Newsletter.* Boston: Harvard University Press.

Ministry of Education and Training, Ontario. (1999). *The Ontario curriculum: Mathematics, Grade 9 - 10.*

Education Quality and Accountability Office. (1997). *Grade 3 assessment of reading, writing and mathematics.*

National Council of Teachers of Mathematics (NCTM). (1994). *The assessment standards for school mathematics.* Reston, Va: NCTM.

National Council of Teachers of Mathematics (NCTM). (1989). *The curriculum and evaluation for school mathematics.* Reston, Va: NCTM.

National Council of Teachers of Mathematics. (1991). *The professional standards for teaching mathematics.* Reston, Va: NCTM.

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The Literacy Roadmap, K–12

Mary Lou McKinley and Jan McLellan

The purpose of the project, which we report on below, was to assist teachers in preparing their students for the literacy component of the Grade 6 assessment.

A Resource for Teachers

What support is needed for teachers in order to teach literacy skills ?—Over the course of the last three years, we have been working on a resource to address this question. By incorporating the research findings in the fields of literacy, brain-based learning, assessment and evaluation, staff development models, and our extensive experiences as classroom teachers, program consultants and administrators, we have produced a resource that helps bridge the gap between research and classroom practice. We call this resource "The Literacy Roadmap."

The Literacy Roadmap consists of three distinct divisions (Kindergarten to Grade 2; Grade 3-6; Grade 7-12) and addresses all components of a balanced literacy program. These divisions were determined by reviewing the curricular expectations from across North America.

The Literacy Roadmap is a process organizer, or a tool, to:

- design performance-based tasks
- assess teacher competency and student knowledge and skill level
- design staff development
- provide program ideas for teaching, practicing and applying literacy skills

There are distinct areas or "Information Hubs" within each of the Roadmaps. Each of the hubs contains the elements that teachers must teach and students must learn within each division.

Kindergarten to Grade 2/Learning to Read—The skills addressed within this division are critical for literacy acquisition. It is here that children acquire the skills necessary to become fluent readers. These skills must become automatic, allowing the reader to spend less time on the mechanics of reading and more time on understanding what has been read.

Grades 3 to 6/Reading to Learn —This stage provides a framework to hone or practise the skills taught in the Kindergarten to Grade 2 years. Students refine and consolidate the mechanics of reading and writing as they venture into challenging applications of their knowledge. Large sections of the Kindergarten to Grade 2 Roadmap have now disappeared with the expectation that these skills have been consolidated.

Grades 7 to 12/Transfer of Knowledge—At this stage, reading and writing become a tool to express new understanding. Within this division, students consolidate their thinking and make connections between what they have read and what they are reading. These connections are then used to create new meanings … a new whole … a new perspective. It is at this stage that the ability to communicate an understanding or apply higher order thinking skills become critical. The curriculum assumes that students have already consolidated the mechanical reading and writing skills necessary to allow for this to happen.

By building the Roadmaps and identifying the integral parts of the language curriculum, literacy assessment tasks can be designed. These tasks use the content areas (science or social studies) as the vehicle in which to assess literacy skills. But the sole purpose of the assessment task is to assess "literacy skills."

Using the Roadmap

Designing the Tasks—In preparation for the upcoming assessment, two of our superintendents gave us an opportunity to use the Literacy Roadmap. The first step was to design a performance-based assessment task. Because the idea of performance-based assessment is a relatively new concept for most of our teachers, we decided that they should be involved in the entire planning process.

Two teachers from seven school sites (lead teachers) were released for a day to review the Language Curriculum and to map expectations (outcomes) to the Literacy Roadmap. They then ranked expectations by importance. By identifying the importance of each expectation, as it related to the roadmap, teachers were then able to identify the specific skills and knowledge they must teach and assess.

The next step was to create a connected context for the learning. The assessment could not be perceived as an "add on." As "space" is a science theme at the Grade 6 level and most classes had either just finished or were in the middle of this unit, the theme "Space: the Final Frontier" was chosen.

Before introducing the task at each site, time was spent with administration and support staff outlining the expectations of the task. A course of action was designed to meet the individual needs of each of the seven sites. The enthusiasm and commitment of the administrative staff was found to greatly influence the acceptance of the task by the faculties. We also observed that this commitment seemed to translate into higher student performance.

Assessing the tasks—After the task was administered, arrangements were made to assess the tasks. Principals released their Grade 6 teams for one-half to one full day so that the marking of the tasks could be completed. To assess the task, rubrics and checklists were used. With guidance, the teachers selected a series of anchor papers to match the assessment rubrics.

> *...teachers had established a high level of trust both among themselves and the project managers.*

The group started with pre-selected training papers (papers that we had already assessed) and worked with a partner to establish reliability. Once reliability was established, the teachers independently marked their own class. When questions surrounding a particular paper ensued, they did not hesitate to ask a colleague or project manager for another opinion. There was no hesitation in asking for assistance. This behaviour indicated to us that the teachers had established a high level of trust both among themselves and the project managers. The dialogue was very focused and began to centre on the questions, "How do I move this child up a level on the rubric?" "I know what he can do, I know what he can't do ... now what do we have to do?"

Since the task was specifically designed using the Literacy Roadmap, student limitations were very easily identified. For example, question # 1 from the task asked the following:

Using the information from the articles about the astronauts, make a list of the qualities you think are important to become an astronaut,

(a) Use the attribute web to organize your thinking.

(b) List your personal qualities. Use an attribute web to help organize your thinking.

(c) Using the attribute webs, construct a Venn Diagram to show the differences and similarities between your qualities and those of an astronaut.

(d) Using this information, write a letter to the director of planning as to whether you feel you *would* or *would not* be suited for a position on the mission. Make sure to give your reasons in *detail*.

The "thinking skills" assessed in question #1 were as follows:

- Organizing information
- Attributing
- Summarizing
- Making Judgments
- Sequencing
- Compare/Contrast

The student limitations were identified as:

- Did not understand the concept of "attributes"
- Did not understand the concept of sequencing ... beginning, middle and end
- Unable to transfer from graphic organizer to text format
- Did not understand the concept of compare/contrast
- Unable to write supported opinion

(In this particular question, we did not assess the mechanics of writing.)

During the marking of the tasks, teachers remarked how easily they were able to see the "gaps" not only in student performance but also in their own pedagogical knowledge base. This was the first time teachers had worked through an assessment in this manner. The professional dialogue that ensued around the assessment was substantial. As Fullan (1982) has pointed out "it is shared understanding that sustains an innovation."

Once the student limitations were identified, a series of learning opportunities were established to improve teacher knowledge and skill. With a "collegial/mentorship" atmosphere already established in each school, it was decided that all schools would be brought together for specific training.

Staff Development—Joyce and Showers (1988) note that "providing conditions that enable teachers to engage in learning-to-learn activities probably means designing training that includes an explication of theory, multiple demonstrations of process and content to be mastered and opportunities for practice with factual, non-evaluative feedback."

The model of delivery provided the entire staff with an opportunity to learn the new concept (acquisition of knowledge), practice the new concept (modeling and peer discussion) and apply the new concept with non-evaluative feedback (peer coaching).

The staff development was based upon the results generated from the assessment task and the teach, practice and apply sections of the Roadmap. The following areas were identified for staff development:

- Critical/creative thinking skills and application
- Using cognitive/graphic/structural organizers
- Using kinesthetic strategies to teach organizational and sequencing skills
- Critical reading strategies

At the writing of this article, staff development for teachers is still ongoing. The comments we have received to date have been extremely positive from both students and faculty. Priva, a Grade 6 student, told us:

"I liked the task because it helped me think. I don't know why, but for some reason, I'd rather do these tough tasks than do the normal stuff we usually do."

The teachers now have a common focus. They feel their planning is more closely related to the expectations of the curriculum. They are beginning to question their own practice and seek answers to their questions. As Anne, a teacher, so aptly remarked:

"Now I know what I don't know and even though it has caused me some stress, at least now I know where I'm headed...and I'm excited about my new learning!"

References

Brydges, B., & Earl, L. (1997). No whining! No gloating ! Large scale assessment as a starting point for program changes. *Orbit* (28)3, 23–24.

Fullan, M. (1982). *The meaning of educational change*. New York: Teachers College Press.

Joyce, B., & Showers, B. (1988). *Student achievement through staff development*. New York & London: Longman.

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Shelley Peterson

From Tiger to Anansi

The importance of personal voice and ownership of one's stories is communicated through a Jamaican folktale *Tiger and Anansi the Spider* (Johnson, Sickels, Sayer, & Horovitz, 1977). Tiger is the all-powerful animal of the forest whose name is identified with the stories told around the fire at night. He presents a seemingly impossible challenge to Anansi when asked if the stories could be renamed "Anansi stories." Anansi, the smallest and least powerful creature, must capture Snake alive and bring him to Tiger within three days! Unsuccessful in his first two attempts to trap Snake, Anansi uses his wits on the third. Anansi appeals to Snake's pride about being longer than the bamboo tree across the river. Snake consents to being measured against the bamboo tree as Anansi lays it out on the ground. Unknowingly, Snake allows Anansi to bind him to the tree. Tiger, honouring his word about the capture of Snake, declares that the stories will forever forward be called "Anansi Stories."

One way to interpret this story is to recognize that students, like Anansi, need to feel a sense of ownership over their writing. They need ample opportunities to write stories, letters, poems, plays, reports, persuasive arguments, etc., on topics that are significant to them. The goals for writing instruction should be helping students to use writing to make sense of their world and to discover more about themselves, together with the development of skills in using particular genres, styles and writing conventions. Evaluation methods and criteria should reflect these goals, as well.

This premise may sound idealistic, and like Tiger's challenge to Anansi, seemingly impossible to achieve, particularly in a political climate where accountability for classroom instruction is measured by students' success on provincial achievement tests. The use of standardized rubrics and the need to prepare students for a test that evaluates their writing in terms of provincial standards are hardly compatible with a desire to foster self-expression and self-discovery through writing. Yet, like Anansi, who realized that traditional methods for capturing animals would not work for him, we also need to find a new approach to writing evaluation in order to develop students' writing skills and at the same time, encourage students' ownership of and commitment to their writing.

Often, a new approach comes to light after taking a second look at the wisdom of those who have gone before. In this instance, I am proposing a re-visioning of a framework that Fulkerson established in 1979. He explained that four philosophies provide the foundations for writing assessment and instruction:

1. formalist philosophy, with an emphasis on conventions of the written product, such as spelling, punctuation, and penmanship;
2. mimetic philosophy, in which teachers are intent on developing students' logic and reasoning skills;
3. rhetorical philosophy, which is concerned with achieving the desired effect on the designated audience by reproducing features of rhetorical forms or genres; and
4. expressive philosophy, which values personal meaning and self-expression.

All of these philosophies make important contributions to writing instruction and assessment. The first three philosophies, formalist, mimetic and rhetorical, emphasize technical writing skills and conformity to widely recognized models of good writing. The expressive philosophy diverges sharply from this pattern, as it encourages exploration and diversity. For this reason, I will address its contribution to writing instruction and assessment separately from the rest.

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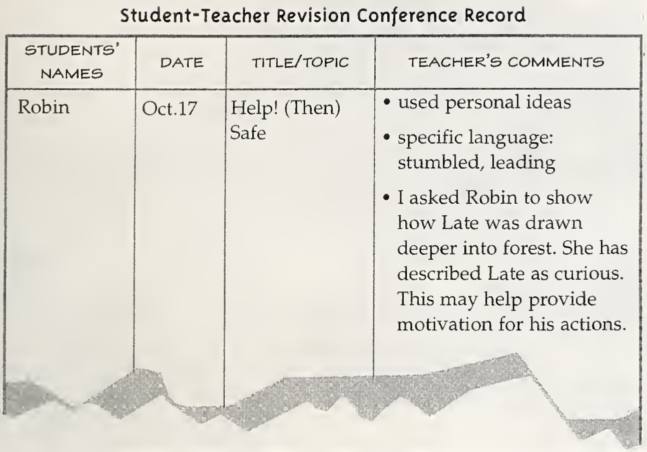
Technical Writing Skills

It can be argued that current assessment methods measure the aspects of writing that are valued within the formalist, mimetic and rhetorical philosophies with a satisfactory degree of objectivity and uniformity. The provincial rubrics (Ontario Ministry of Education, 1999) and commercially-prepared checklists reflect an accumulation of practical experience in evaluating student writing and critical thought about the ways in which students demonstrate their writing skills and knowledge through their written products.

Teaching within these three philosophies is also straightforward. Teachers provide models and explicitly describe characteristics of particular genres, strategies for developing logical and reasoned papers, and uses of spelling, punctuation and grammar rules in mini-lessons. They readily link assessment with instruction by providing rubrics or checklists



Student-Teacher Revision Conference Record

STUDENTS' NAMES	DATE	TITLE/TOPIC	TEACHER'S COMMENTS
Robin	Oct.17	Help! (Then) Safe	• used personal ideas • specific language: stumbled, leading • I asked Robin to show how Late was drawn deeper into forest. She has described Late as curious. This may help provide motivation for his actions.

with the elements of writing that have been modeled and practiced. In follow-up mini-lessons, students and teachers might use the rubrics and checklists to assess pieces written by students in another class or in previous classes taught by the teacher. In such mini-lessons, students would learn to recognize the elements of good writing that are defined in the rubrics and checklists. Reinforcement of the elements of good writing might occur in a student-teacher conference during which the teacher identifies examples of conformity to the rubric/checklist expectations in a student's writing, together with examples of particular elements that are yet to be mastered. Teachers might record their observations during student-teacher revision conferences using a template such as the "Revising Conference Record" (Peterson, 1998, p. 12).

To this point, assessment of student writing seems very tidy and elegantly simple. Writing instruction and assessment that operates within the formalist, mimetic and rhetorical philosophies allows students to develop skills in order to communicate their ideas. Instruction can be directed toward students' needs in terms of their use of writing conventions, logic and genres because it is so clearly linked to assessment. Students develop as writers, and designers of large-scale evaluations of student writing are assured that they have objective, reliable and valid tools for measuring that development. Why stir in something that will complicate matters?

Exploration and Diversity

The answer to this question brings us back to the expressive philosophy of writing and Anansi's desire to have a voice in the stories of the forest. The value of the expressive philosophy to writing instruction and assessment is too great to allow it to sit on the sidelines while the other three philosophies direct what happens in classrooms. If students haven't been taught to explore and discover more about themselves and their world, and to express themselves to others, they miss out on the powerful, self-satisfying reasons for learning to write in the first place. Heard (1995, p. 4-5) states that writing is "a place from which one's strength of character is drawn, a place where one feels at home." She then explains that "a sense of where we feel most at home is a way of keeping grounded; it can give us [a] sense of rootedness and safety." While it is unlikely that all students will find a place of strength in writing, it is very likely that they can use writing as a tool to discover more about where their personal places of strength might lie. Furthermore, in order for students to feel committed to improving the features of writing (use of writing conventions, elements of various genres and reasoning skills) that are evaluated in rubrics, they must find writing personally meaningful and have a sense of ownership over their writing.

Grounded in formalist, mimetic and rhetorical philosophies, current writing evaluation assumes the existence of a universal standard of writing (Purves, 1991; Schwegler, 1991) and that fairness and consistency are possible only when using evaluation tools that reflect this universal standard. There is growing evidence, however, that fairness and consistency in current writing evaluation practices are illusory. Gender patterns in the large-scale evaluation of student writing have existed over time and across international borders (Alberta Education, 1995; Applebee, Langer & Mullis, 1986; Stobart, Elwin & Quinlan, 1992). Repeatedly, girls' writing receives higher scores than boys' writing. Furthermore, my research (Peterson, 1998) shows that:

1. gender disparities may be attributed to a narrow definition of good writing rather than to inadequacies in male students' writing competencies and motivation to write; and
2. assessment practices emphasizing conformity over self-expression overlook the influence of cultural expectations on writing assessment and perpetuate gender disparities in writing success.

Teachers in my study talked about girls' writing in more favourable terms than they did boys' writing. Their scoring of one story, written by a girl in a style that exemplified both female and male characteristics, was significantly higher when teachers perceived the writer to be a girl. Both studies showed that current evaluation practices that involve comparing students' writing to a widely recognized standard does not ensure equity and validity.

Introducing these personal and social dimensions, expressive philosophy moves writing assessment into a more fluid and less tidy realm than that of the formalist, mimetic and rhetorical philosophies. If we truly want to

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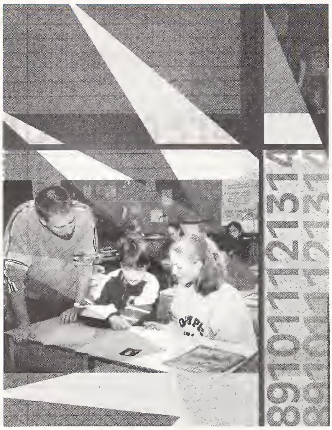
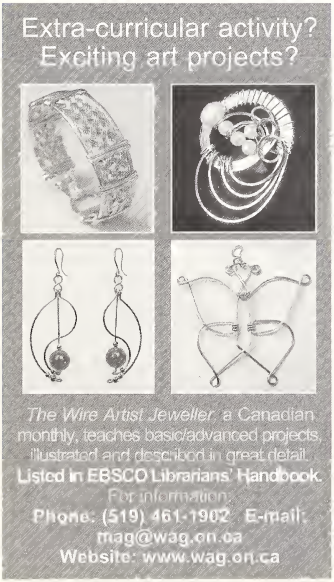
assess students' writing development as holistically and fairly as possible, however, we must consider how writing assessment can accommodate student writers' need to express their individuality and at the same time recognize the need for conformity to conventions in order to communicate that uniqueness to others.

Initial steps toward incorporating all four philosophical approaches in writing assessment might involve adding assessment categories such as "Expression of Individuality" and "Creativity/Presenting New Ways of Thinking About a Topic" to the existing rubrics and checklists. Within these categories, specific criteria might include:

1. includes details from personal experience/interests/thoughts/feelings
2. uses language/ideas that reflect student's interests and personality
3. presents a new twist on a familiar topic/idea
4. experiments with new ideas

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Students' self-assessment is an important element of more comprehensive writing assessment practice. Students might use checklists or write comments identifying the unique twists on familiar ideas that they expressed in their writing and the parts of their writing that they feel express their personality. They might also look at those parts that give students the greatest pleasure to create, those that reflect a new discovery about themselves or their world, and those that reflect students' experimentation with new ideas. By asking students to consider these aspects of writing in their assessment of their writing, we present writing as a creative, expressive act. We also show that the expression of students' individuality is as at least as important as conforming to standards established in the rubrics that are based on formalist, mimetic and rhetorical philosophies of writing instruction and assessment.

Assessing student writing in ways that value self-expression as well as conformity to writing conventions is a complex challenge. Like Anansi's struggle to capture Snake alive, this challenge requires thinking outside the traditional approaches.

The ideas I have presented in this article are an initial step in this process. Many more conversations about the role of writing in students' lives within and beyond the classroom and the ways in which writing assessment reinforces this role must take place if we are to meet this challenge.

References

Alberta Education. (1995). *Achievement testing program provincial report.* Edmonton, AB: Author.

Applebee, A. N., Language, J. A., & Mullis, I. V. (1986). *The writing report card: Writing achievement in American schools* (Report No. 15-W-02). Princeton, NJ: Educational Testing Service.

Peterson, S. (1997). *Teaching conventions unconventionally.* Edmonton, AB: F.P. Hendriks.

Peterson, S. (1998). Evaluation and teachers' perception of gender. *Research in the Teaching of English, 33*(2), 181–208.

Fulkerson, R. (1979). Four philosophies of composition. *College Composition and Communication, 3*(4), 343–348.

Heard, G. (1995). *Writing toward home.* Portsmouth, NH: Heinemann.

Johnson, E., Sickels, E. R., Sayers, F. C., & Horovitz, C. (Ed.s.). (1977). *Anthology of children's literature* (5th ed.) (pp. 524–526). Boston, MA: Houghton Mifflin Co.

Ontario Ministry of Education. (1999). *The Ontario curriculum—exemplars grades 1-8: Writing.* Toronto: Author.

Purves, A. C. (1992). Reflections on research and assessment in written composition. *Research in the Teaching of English, 26,* 108–122.

Schwegler, R. A. (1991). The politics of reading student papers. In R. Bullock & J. Trimbur (Eds.), *The politics of writing instruction: Post secondary* (pp. 203–225). Portsmouth, NH: Heinemann.

Stobart, G., Elwood, J., & Quinlan, M. (1992). Gender bias in examinations: How equal are the opportunities? *British Educational Research Journal, 18,* 261–276.

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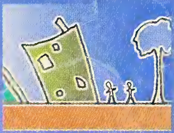

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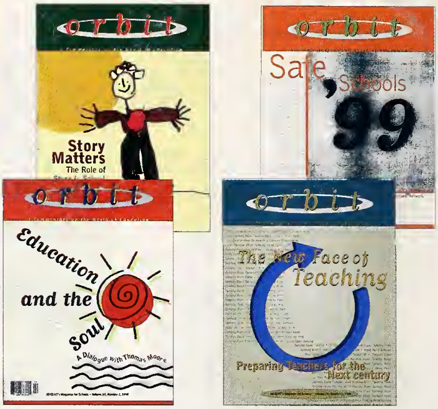

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